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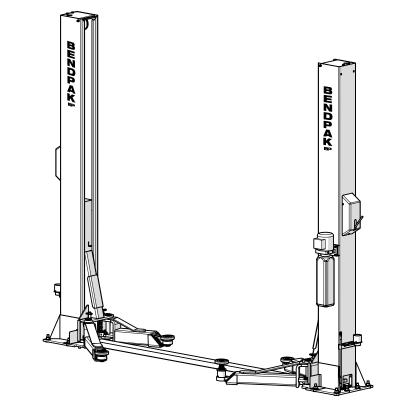
# XPR-9 Two-Post Lift Series Installation and Operation Manual

Manual P/N 5900371 - Manual Revision D5 - March 2024

Models:

- XPR-9TF
- XPR-9SBT

Original Instructions in the English language.



XPR-9TF shown with optional equipment.

Designed and engineered by BendPak Inc. in Southern California, USA. Made in China.



**IMPORTANT SAFETY INSTRUCTIONS, SAVE THESE INSTRUCTIONS! Read the entire contents** 

of this manual **before** using this product. Failure to follow the instructions and safety precautions in this manual can result in serious injury or death. Make sure all other operators also read this manual. Keep the manual near the product for future reference. **By proceeding with setup and operation, you agree that you fully understand the contents of this manual and assume full responsibility for product use**.

**Manual.** XPR-9 Series Two-Post Lifts, *Installation and Operation Manual*, Manual Part Number 5900371, Manual Revision D5, released March 2024.

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**Limitations.** Every effort has been made to ensure complete and accurate instructions are included in this manual. However, product updates, revisions, and/or changes may have occurred since this manual was published. BendPak reserves the right to change any information in this manual without incurring any obligation for equipment previously or subsequently sold. All drawings are reference only – do not scale. BendPak is not responsible for typographical errors in this manual. You can always find the latest version of the **manual for your product on the BendPak website**.



**Warranty.** The BendPak warranty is more than a commitment to you: it is also a commitment to the value of your new product. Contact your nearest BendPak dealer or visit

www.bendpak.com/support/warranty for full warranty details. Go to bendpak.com/support/registeryour-product/ and fill out the online form to register your product (be sure to click Submit).

**Safety.** Your Lift was designed and manufactured with safety in mind. Your safety also depends on proper training and thoughtful operation. Do not set up, operate, maintain, or repair the Lift without reading and understanding this manual and the labels on the unit; *do not use your Lift unless you can do so safely!* 

**Owner Responsibility.** In order to maintain your product properly and to ensure operator safety, it is the responsibility of the product owner to read and follow these instructions:

- Follow all installation, operation, and maintenance instructions.
- Make sure product installation conforms to all applicable local, state, and federal codes, rules, and regulations, such as state and federal OSHA regulations and electrical codes.
- Read and follow all safety instructions. Keep them readily available for operators.
- Make sure all operators are properly trained, know how to safely operate the unit, and are properly supervised.
- Do not operate the product until you are certain all parts are in place and operating correctly.
- Carefully inspect the product on a regular basis and perform all maintenance as required.
- Service and maintain the unit only with approved replacement parts.
- Keep the manual with the product and make sure all labels are clean and visible.
- BendPak makes no promises, guarantees or assurances that our products meet any state, county, federal or international mandated permit, license, code, standard, certification, or any other mandate other than what is listed or shown on BendPak website(s), or any BendPak online or published catalog. Not all BendPak lift models meet the standards as prescribed by ANSI/ALI ALCTV-(current edition) or ANSI/UL 201. Consult www.autolift.org for a complete list of lift models that meet ANSI/ALI ALCTV-(current edition) or ANSI/UL 201, or contact BendPak via www.bendpak.com/contact/ Buyer assumes full responsibility for any state, county, federal or international mandated permit, license, code, standard, certification, or any other mandate required related to the installation and/or operation of any BendPak product. BendPak will not be responsible for any charges, fines, liens, or other levies imposed on the Buyer related to any special or regional structural, seismic or any other building code and/or codes such as the Uniform Building Code (UBC), International Building Code (IBC), or any other state, county,
  - codes such as the Uniform Building Code (UBC), International Building Code (IBC), or any other state, county, federal or international mandated permit, license, code, standard, certification, or other mandate, law, rule, regulation or directive by any other agency, government, administrations, or corporations whether state, county, federal, or international mandated.
- Only use the Lift if it can be used safely!

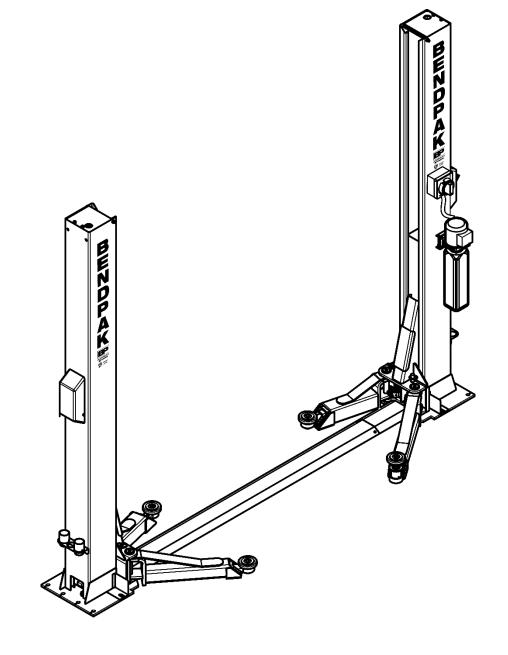
**Unit Information.** Enter the Model Number, Serial Number, and the Date of Manufacture from the ID label on your unit. This information is required for part or warranty issues.

Model: \_\_\_\_\_

Serial: \_\_\_\_\_

Date of Manufacture: \_\_\_\_\_





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# Introduction

This manual describes the following Two-Post Lift models:

- XPR-9TF
- XPR-9SBT

These models are similar, if no distinction is made, then the information applies to both models. If information applies to only one model, that distinction is mentioned in the text.

More information about the full line of BendPak products is available at **bendpak.com**.

▲ DANGER Be very careful when installing, operating, maintaining, or repairing this equipment; failure to do so could result in property damage, product damage, injury, or (in very rare cases) death. Make sure only authorized personnel operate this equipment. An authorized technician must perform all repairs. Do not make modifications to the unit; this voids the warranty and increases the chances of injury or property damage. Make sure to read and follow the instructions on the labels on the unit.

This manual is mandatory reading for all users of XPR-9 Series Lifts, including anyone who installs, operates, maintains, or repairs them. Always keep this manual on or near the equipment.

Technical support and service is available from your dealer, on the Web at **bendpak.com/support**, by email at **support@bendpak.com**, or by phone at **(800) 253-2363** select option 7, then 4.



Scan this QR Code for up-to-date information and videos on the XPR-9 Lift series.

Online chat is also available at **www.bendpak.com** click the chat icon.

# **Shipping Information**

Your equipment was carefully checked before shipping. Nevertheless, you should thoroughly inspect the shipment **before** you sign to acknowledge that you received it.

When you sign the bill of lading, it tells the carrier that the items on the invoice were received in good condition. *Do not sign the bill of lading until after you have inspected the shipment.* If any of the items listed on the bill of lading are missing or damaged, do not accept the shipment until the carrier makes a notation on the bill of lading that lists the missing or damaged goods.

If you discover missing or damaged goods **after** you receive the shipment and have signed the bill of lading, notify the carrier at once and request the carrier to make an inspection. If the carrier will not make an inspection, prepare a signed statement to the effect that you have notified the carrier (on a specific date) and that the carrier has failed to comply with your request.

It is difficult to collect for loss or damage after you have given the carrier a signed bill of lading. If this happens to you, file a claim with the carrier promptly. Support your claim with copies of the bill of lading, freight bill, invoice, and photographs, if available. Our willingness to assist in helping you process your claim does not make us responsible for collection of claims or replacement of lost or damaged materials.

# **Safety Considerations**

**Read this entire manual carefully before using your new product.** Do not install or operate the product until you are familiar with all operating instructions and warnings. Refer to ANSI/ALI ALIS Standard *Safety Requirements for Installation and Service of Automotive Lifts* for more information about safely installing your Lift.

California Proposition 65. This product can expose you to chemicals including styrene and vinyl chloride which are on the list of over 900 chemicals identified by the State of California to cause cancer, birth defects or reproductive harm. ALWAYS use this product in accordance with BendPak's instructions. For more information go to www.P65Warnings.ca.gov.

# **IMPORTANT SAFETY INSTRUCTIONS!**

## SAVE THESE INSTRUCTIONS!

- 1. Read all instructions.
- 2. Care must be taken as burns can occur from touching hot parts.
- 3. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged until it has been examined by a qualified service person.
- 4. Do not let a cord hang over the edge of a table, bench, or counter or come in contact with hot manifolds or moving fan blades.
- 5. If an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Cords with a current rating less than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.

- 6. Always unplug the equipment from the electrical outlet when not in use. Never use the cord to pull the plug from the outlet. Grasp the plug and pull to disconnect.
- 7. Let the equipment cool completely before putting away. Loop cord loosely around equipment when storing.
- 8. To reduce the risk of fire, do not operate in the vicinity of open containers of flammable liquids (gasoline).
- 9. Adequate ventilation should be provided when working on operating internal combustion engines.
- 10. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
- 11. To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
- 12. Use only as described in this manual. Use only BendPak recommended attachments.
- 13. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.
- 14. To reduce the risk of injury, close supervision is necessary when this product will be used around children.
- 15. To reduce the risk of injury, *never* attempt to lift more than the rated capacity. Refer to loading instructions.
- 16. The Lift uses electrical energy; if your organization has Lockout/Tagout policies, make sure to implement them after connecting the Lift to a power source.
- 17. Refer to markings for proper load on electrical receptacles.
- 18. Only operate your Lift between temperatures of +41°F to +104°F (+5°C to +40°C).
- 19. The Lift should **only** be operated by authorized personnel. Keep children and untrained personnel away from the Lift.
- 20. Do not make any modifications to the Lift; this voids the warranty and increases the chances of injury or property damage.
- 21. Do not use the Lift while tired or under the influence of drugs, alcohol, or medication.
- 22. Consider the work environment. Keep the work area clean. Cluttered work areas invite injuries. Keep areas well lit.
- 23. **Always** make sure the Lift is secured on Safety Locks before attempting to work on or near a Vehicle.
- 24. Make a thorough inspection of the product at least once a year. Replace any damaged or severely worn parts, decals, or warning labels. Replace worn or damaged parts with BendPak or BendPak approved parts and assemblies only.
- 25. BendPak recommends referring to the ANSI/ALI ALIS Standard *Safety Requirements for Installation and Service* for more information about safely installing, using, and servicing your Lift.
- 26. XPR-9 Series Lifts are Two-Post Service Lifts. Use them only for their intended purpose.
- 27. You **must** wear OSHA-approved (publication 3151) personal protective equipment at all times when installing, using, maintaining, or repairing the Lift. Leather gloves, steel-toed work boots, eye protection, back belts, and hearing protection are **mandatory**.
- 28. Keep loads balanced on the Lift Arms. Clear the area immediately if a Vehicle is in danger of falling off the Lift. Do not make any modifications to the Lift.

- 29. Modifications void the warranty and increase the chances of injury or property damage. *Do not modify any safety-related features in any way*.
- 30. Make sure all operators read and understand this Installation and Operation Manual. *Keep the manual near the Lift at all times.*
- 31. While handling a Hydraulic Cylinder or a Hydraulic Hose, **always** wear gloves. In rare cases, a needle-like stream of hydraulic fluid (even at low pressure) can penetrate fingers, hands, or arms; such a puncture can feel like a bite, electric shock, or a prick. While it may seem like a minor issue, any amount of Hydraulic Fluid injected into the human body is a serious issue. Anyone suffering such a puncture wound should be **immediately** taken to a hospital emergency room to determine the extent of the injury. Explain the circumstances of the injury to the attending physician, including what kind of Hydraulic Fluid was involved. Do not assume a puncture wound that could have been caused by Hydraulic Fluid is a minor issue; it could be life threatening.
- 32. Make an inspection of the Lift **before** using it. Check for damaged, worn, or missing parts. Do not use it if you find any of these issues. Instead, take it out of service, then contact an authorized repair facility, your dealer, or BendPak at (800) 253-2363 select option 7, then 5 or support@BendPak.com.

## Symbols

Following are the symbols used in this manual:

**Anger**Calls attention to an immediate hazard that will result in injury or death.**Anger**Calls attention to a hazard or unsafe practice that could result in injury or death.**Anger**Calls attention to a hazard or unsafe practice that could result in minor personal<br/>injury, product, or property damage.**NOTICE**Calls attention to a situation that, if not avoided, could result in product or property<br/>damage.**Anger**Calls attention to information that can help you use your product better.

# **Liability Information**

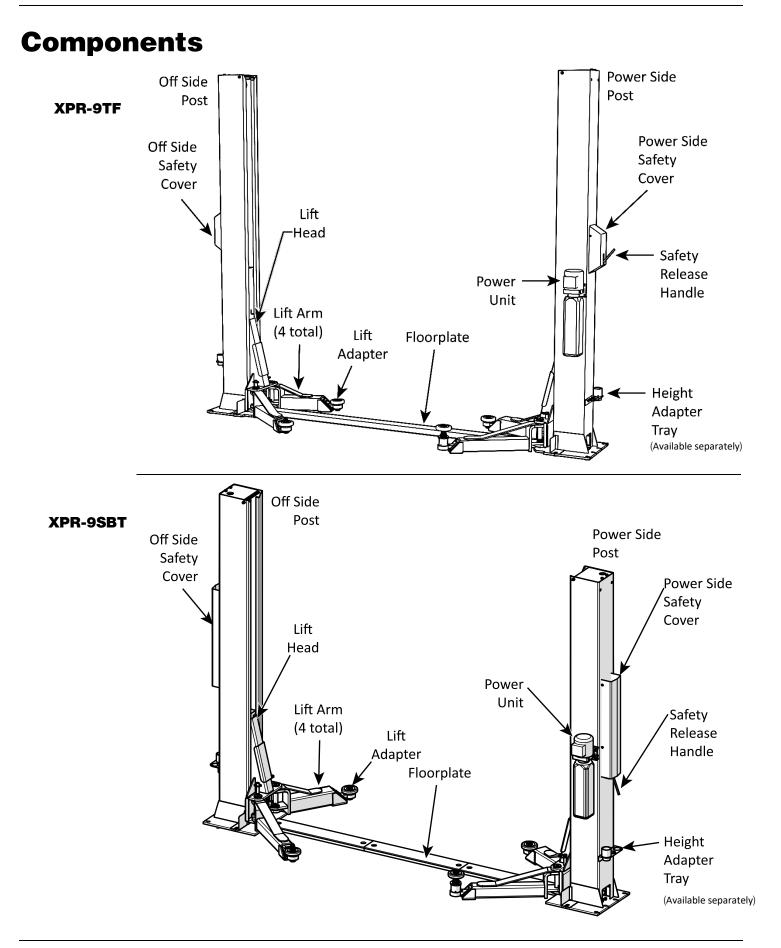
BendPak Inc. assumes **no** liability for damages resulting from:

- Use of the product for purposes other than those described in this manual.
- Modifications to the equipment without prior, written permission from BendPak Inc.
- Injury or death caused by modifying, disabling, overriding, or removing safety features.
- Damage to the equipment from external influences.
- Incorrect operation of the equipment.

# **Frequently Asked Questions**

**Question**: What kinds of Vehicles can I raise on my XPR-9 Series Lift? **Answer**: Cars, trucks, SUVs, or similar; up to 9,000 lbs. (4,082 kg) each.

- Q: How long will it take to raise or lower my Vehicle?
- A: Anywhere from 30 to 45 seconds, depending on how high you raise it.
- **Q**: Does the Lift have to be anchored in place?
- A: Yes. Two-Post Lifts *must* be anchored. Your Lift comes with high-quality Anchor Bolts; use only the Anchor Bolts that came with your Lift.
- Q: How thick does my Concrete have to be?
- A: 4.25" thick, 3,000 PSI, cured for a minimum of 28 days. Do not install the Lift on cracked or defective Concrete. **Do not install on asphalt or any surface other than Concrete**.
- **Q**: Can I install my Lift outside?
- A: No. All XPR-9 Series Lifts are approved for indoor installation and use only. **Outdoor** *installation is prohibited*.
- Q: How many Safety Lock positions does my Lift have?
- A: The XPR-9TF has 13 Safety Lock Positions; the XPR-9SBT has 10 Safety Lock positions.
- Q: Does the Lift have a Front and Rear?
- A: Yes and no. Because you can drive onto a Two-Post Lift from either opening, there is technically no Front or Rear. However, most garages have an Approach side and a Wall side, so in that case, the Wall side is the Front, and the Approach side is the Rear.
- Q: How long can I leave a Vehicle raised up on my Lift?
- A: For a long time, as long as you leave the Lift *engaged* on its Safety Locks. Once the Lift is engaged on its Safety Locks, gravity holds it in position. **Only leave your Lift either on the ground (fully lowered) or engaged on its Safety Locks**.
- **Q**: How do I know where to put the Adapters when I want to raise a Vehicle?
- A: The Vehicle needs to be balanced on the Lift, so you must position the Adapters (sometimes called Pads) so that they contact the manufacturer's recommended Lifting Points. If you do not know where the manufacturer's recommended Lifting Points are on a Vehicle, you must find out before you raise it. ALI provides guides that will assist you: Vehicle Lifting Points for Frame Engaging Lifts shows the Lifting Points for hundreds of Vehicles. Lifting It Right includes information about how to raise Vehicles correctly.



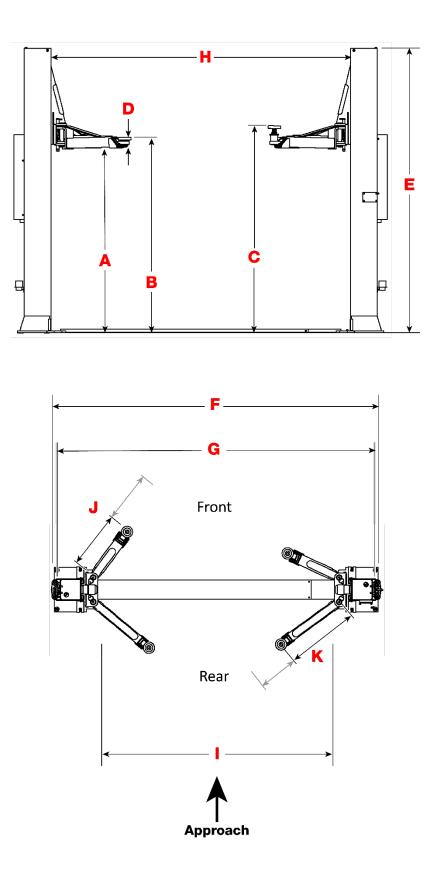
#### **XPR-9 Series Lift components include:**

- **Power Side Post** The Power Side Post holds the Power Unit, the Safety Lock Release Handle, and the Lowering Handle (which is on the Power Unit).
- Off Side Post The Post without the power unit mounting bracket.
- **Power Unit** Provides Hydraulic Fluid to the Lift and connects to an appropriate power source. Includes the Up Button, the Lowering Handle, and the Hydraulic Fluid reservoir.
- **Up Button** Press and hold to raise the Vehicle on the Lift.
- **Safety Lock Release Handle** Located on the Power Post above the Power Unit, it disengages the Safety Locks so you can lower the Lift.
- **Power Disconnect Switch** *Not supplied*. Immediately interrupts main electrical power to the Lift. Used for electrical circuit faults, emergency situations, or when the Lift is undergoing service or maintenance.
- **Thermal Disconnect Switch** *Not supplied*. Automatically shuts down the equipment in the event of an overload or an overheated motor. This equipment is not included with the Lift and must be installed a licensed Electrician.
- Safety Covers Cover the Safety Lock Mechanism on the Posts.
- **Floor Plates** Cover the Hydraulic Hoses, Equalizing Cables, and Safety Cable being routed to each Post.
- Lift Heads Sometimes called Carriages. Lift Heads move up and down in the Posts. They connect to the Lift Arms, so when the Lift Heads move up, the Lift Arms also move up, thus raising any Vehicle on the Lift Arms.
- Lift Arms Extendable steel arms that attach to the Lift Heads. Adapters (also called Pads) attach at the end of each Lift Arm; they contact the Lifting Points on the underside of the Vehicle.
- **Adapters** Pads that contact the Lifting Points on the underside of the Vehicles you raise. Four 60 mm Lift Adapters are included with your Lift. Additional adapters are available separately and include Frame Cradle Pads, which are well-suited for raising and holding trucks and SUVs (body-on-frame style).
- **Height Adapter Trays** Available separately, attach to the bottom of the Posts, used for holding the Adapters when not in use.
- **Safety Locks** Hold the Lift Heads up when engaged. Multiple Safety Lock heights let you select the best one for your needs. Once engaged on its Safety Locks, the Lift Heads stay up, even if the Lift loses power. Only leave your Lift fully lowered or engaged on Safety Locks.

Safety Locks are hidden by the Posts, but you can hear them as the Lift rises. Refer to **About Safety Locks** for more information.

• **Equalizing Cables** — Two Cables that keep the Lift Heads synchronized. You do not want one Lift Head lowering or raising faster than the other Lift Head; the Equalizing Cables keep them synchronized. The two Equalizing Cables are the same length.

# **Specifications**



Model	XPR-9SBT	XPR-9TF	
Lifting Capacity	9,000 lbs. (4,082 kg)		
Maximum Capacity – Front Axle	4,500 lbs. (2,041 kg)		
Maximum Capacity – Rear Axle	4,500 lbs. (2,041 kg)		
A – Rise	75.25″ (1,914.5 mm)	69″ (1,753 mm)	
B – Lifting Height w/Pad*	77.207″ (1,961 mm)	73.75″ (1,870 mm)	
C - Maximum Lifting Height*	83.25″ (2,117 mm)	78.25″ (1,987 mm)	
D – Minimum Height w/ Pad	4.75″ (118 mm)	4.75″ (118 mm)	
E – Height Overall	112.375″ (2,854 mm)	123.25″ (3,128 mm)	
F – Width Overall	145″ (3,683 mm) (Fixed)	132″ – 145″ (3,353 mm – 3,683 mm)	
<b>G</b> – Outside Posts	139.75″ (3,549 mm)	124.75″ – 137.75″ (3,169 mm – 3,499 mm)	
H − Inside Posts (Narrow)	110 5/ (0.000 mm)	103.5″ (2,629 mm)	
H – Inside Posts (Wide)	118.5″ (3,009 mm)	116.5″ (2,959 mm)	
I – Drive-Thru Width (Narrow)	100// (0.004 mm)	91″ (2,311 mm)	
I – Drive-Thru Width (Wide)	106″ (2,694 mm)	104″ (2,642 mm)	
J – Front Arm Reach (Min)	25.5″ (646 mm)	25.5″ (646 mm)	
J – Front Arm Reach (Max)	49.5″ (1,255 mm)	49.5″ (1,255 mm)	
K – Rear Arm Reach (Min)	32.25″ (821mm)	32.25″ (821mm)	
K – Rear Arm Reach (Max)	52.5″ (1,331 mm)	52.5″ (1,331 mm)	
Floorplate Dimensions	H: 1.375″ (35 mm) W: 6″ (150 mm)	H: 1.5″ (37 mm) W: 8.5″ (216 mm)	
Safety Lock Positions	10	13	
Standard Motor**	220 VAC, 60 Hz, 1 Phase, ≈22 Amps		
Time to Full Rise	≈45 seconds		
Sound	<85dB		

\* *Lifting Height w/Pad* is maximum lifting height with Pads at lowest height, no height adapter. *Maximum Lifting Height* is maximum lifting height with Pads at top height and with the optional 2.5" (63 mm) adapter.

\*\* Special voltages available upon request.

Specifications subject to change without notice.

# **Installation Checklist**

Following are the steps needed to install an XPR-9 Series Lift; perform them in this order.

- □ 1. Review the Safety Rules and information.
- $\Box$  2. Plan for Electrical work.
- $\hfill\square$  3. Make sure you have the necessary Tools.
- $\Box$  4. Review the Installation Orientation.
- $\hfill\square$  5. Review Clearances around and above the Lift.
- □ 6. Select the Installation Location.
- □ 7. Put Equalizing Cables into position in the Lift Posts.
- □ 8. Read about Hydraulic Contamination.
- □ 9. Read about Thread Sealant.
- $\hfill\square$  10. Put the Hydraulic Hoses into position in the Lift Posts.
- $\hfill\square$  11. Create Chalk Line Guides for the Posts.
- $\Box$  12. Install the Equalizing Cables.
- □ 13. Install Cylinder Chain and Roller.
- □ 14. Anchoring the Posts and Install the Left and Right Foot Guards.
- □ 15. Install the Safety Assemblies and Safety Lock Cable.
- □ 16. Install and Connect the Hydraulic Hoses.
- □ 17. Mount the Power Unit (do not connect it to power yet).
- □ 18. Learn about Arm Restraint Gears.
- □ 19. Install the Lift Arms.
- $\Box$  20. Contact the Electrician.
- 21. Connect the Power Unit (*Electrician required*).
- □ 22. Install the Power Disconnect Switch and Thermal Disconnect Switch (*Electrician required*).
- □ 23. Perform final Leveling.
- □ 24. Install the Safety Covers.
- $\Box$  25. Lubricate the Lift.
- □ 26. Perform an Operational Test.
- $\Box$  27. Review the final Checklist.
- $\hfill\square$  28. Leave the Manual with the Owner/Operator.

# Installation

The installation process includes multiple steps. Perform them in the order listed.

## **Reviewing the Safety Rules**

When installing a Lift, your safety depends on proper training and thoughtful operation.

WARNING
 Do not install this equipment unless you have automotive lift installation training.
 Always use proper lifting tools, such as a Forklift or Shop Crane, to raise heavy
 components. Do not install this equipment without reading and understanding this
 Manual and the Labels on the unit.

Only fully trained personnel should be involved in installing this equipment. Pay attention at all times. Use appropriate tools and lifting equipment. Stay clear of moving parts.

WARNING You must wear appropriate protective equipment at all times during installation: leather gloves, steel-toed work boots, eye protection, back belts, and hearing protection.

## **Preparing for Electrical Work**

You will need to have a licensed Electrician available at some point during the installation.

# **DANGER** All wiring *must* be performed by a licensed Electrician. Verify all electrical work conforms to applicable local, state, and federal codes, rules, and regulations.

Notify your Electrician in advance so they arrive prepared with the items required to connect to the facility's power system or an appropriate power cord with plug for connecting to an appropriate power source, a Power Disconnect Switch, and a Thermal Disconnect Switch. These items are *not* supplied with the Lift.

The Electrician needs to:

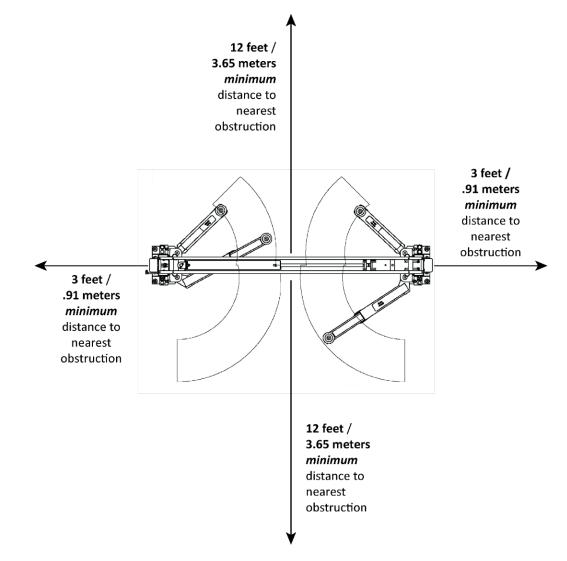
• **Connect to power**. The Power Unit comes with a pigtail for wiring to a power source. Have your Electrician connect a power cord with plug to the electrical box on the Lift (for connection to a power outlet) or have them wire it directly into the electrical system at the Lift location.

Note that *installing* the Power Unit and *connecting* the Power Unit to a power source are separate procedures and are done at different times in the installation process. You do **not** need an Electrician to *install* the Power Unit, but an Electrician is **required** to *connect* the Power Unit to the power source.

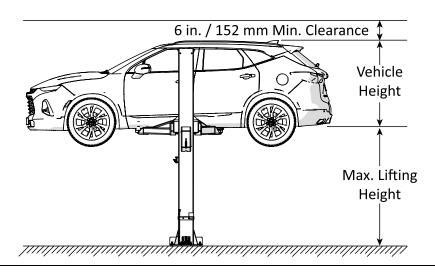
- **Install a Power Disconnect Switch**. A Power Disconnect Switch is used to shut down the Lift in the event of an electrical circuit fault, emergency situation, or when the Lift is being serviced. Refer to **Installing a Power Disconnect Switch** for more information.
- Install a Thermal Disconnect Switch. A Thermal Disconnect Switch automatically shuts down the equipment in the event of an overload or an overheated motor. Refer to Installing a Thermal Disconnect Switch for more information.

## **Checking Clearances**

For safety purposes, clear space around and above the Lift is **required**. Drawing is a top view. Not to scale.



Additional distance is required for Vehicles to be driven on to and off of the Lift.



## **Choosing a Wide or Narrow Configuration XPR-9TF Only**

The XPR-9TF may be installed in a Wide or Narrow Configuration:

• Wide Configuration. The Posts are further apart, which means you can raise wider Vehicles on the Lift. This is usually the best choice *if* your Lift location is wide enough to support it. When installing the Equalizing Cables, use the Button End at the very end of the cable.

<i>Wide</i> configuration	<i>Narrow</i> configuration	Attaches at top of Lift Head
<b>—</b> ——		
Button	Button	Threaded
end	end	end

- **Narrow Configuration**. The Posts are closer together. This is usually the best choice for narrower garages, as it uses less width. When you are installing the Equalizing Cables, use the Button End *away* from the end of the cable.
- **Routing the Equalizing Cables**. The Equalizing Cables come with two Button ends, one for the Wide Configuration and one for the Narrow Configuration. *You need to know which Button end to use when you put the Equalizing Cables into position*.
- **Creating the Chalk Line Guides**. You use the Width Overall setting (found in **Specifications**) to create the Chalk Line Guides, so you know how far apart to put your Posts. There are two Width Overall settings, one for the Wide Configuration and one for the Narrow Configuration. You need to know which one to use when you are creating your Chalk Line Guides.

If you are installing a Lift and do not yet know if it is going to be a Wide or a Narrow Configuration, you need to *figure it out now*, before you go any further in the installation process.

# **Gathering Your Tools**

You may need some or all of the following tools:

- Rotary hammer drill (or similar)
- 3/4 " carbide bit (conforming to ANSI B212.15)
- Hammer
- 4' level
- Open-end wrench set, SAE, and metric
- Socket and ratchet set, SAE, and metric
- Hex key wrench set
- Crescent and pipe wrenches
- Torque wrench

#### **Lubricants Needed**

- White Lithium Multi-Purpose Lubricant
- Red Lithium Grease
- ALMASOL Wire Rope Lubricant or 90W Gear Oil

- Crowbar
- Chalk line
- Medium-sized flat screwdriver
- Tape measure, 25' or more
- Needle-nose pliers
- Forklift or Shop Crane
- Two 12' ladders
- Two sawhorses

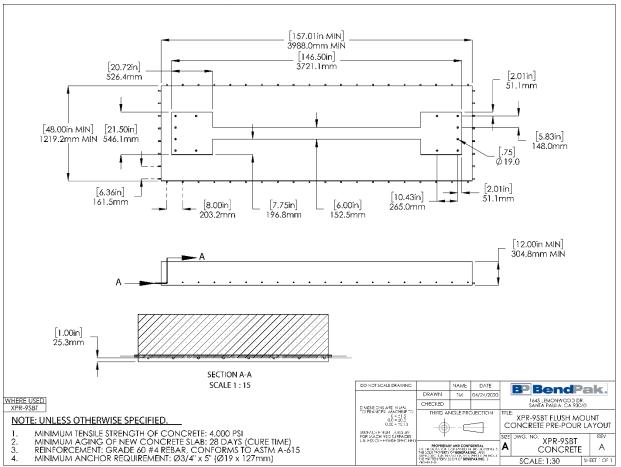
### **Selecting a Location**

When selecting the location for your Lift, consider:

- Architectural plans. Consult the architectural plans for the desired location. Make sure there are no contradictions between what you want to do and what the plans show.
- **Available space**. Make sure there is enough space for the Lift: front, back, sides, and **above**. Refer to **Specifications** for exact measurements.
- **Overhead obstructions**. Check for overhead obstructions such as building supports, heaters, lights, electrical lines, low ceilings, and so on.
- **Power**. An appropriate electrical power source for the Lift's Power Unit is required.
- **Outdoor installations**. Your Lift is approved for *indoor installation and use only*. *Outdoor installation is prohibited*.
- Do **not** install the Lift on any surface other than Concrete conforming to the minimum compressive strength, aging, reinforcement, and thickness stated in these requirements.
- **Never** install the Lift over a concrete expansion joint.
- All Anchors **must** be a minimum of 6" (152 mm) away from any expansion seams, control joints or other inconsistencies in the Concrete.
- **Never** install the Lift on hand-mixed Concrete.
- Do **not** install the Lift on a secondary floor level or on any ground floor with a basement beneath without written authorization from the building Architect and prior approval of BendPak Inc.
- **Never** drill or cut into a post tensioned slab. Seek qualified personnel to identify cable locations prior to cutting or drilling.
- **WARNING** Installing your Lift on a surface with more than three degrees of slope could lead to injury or even death. Only install your Lift on a level floor (defined as no more than 3/8" difference over the installation area). If your floor is not level, consider making the floor level or using a different location.
- **Concrete specifications XPR-9TF and XPR-9SBT**. Verify the concrete is at least 4.25" thick, 3,000 psi, and cured for a minimum of 28 days. Do not install the Lift on cracked or defective concrete. Anchor Bolts must be more than 6" from cracks in the concrete or from a wall.
- CAUTION BendPak Lifts are supplied with installation instructions and concrete anchors that meet the criteria set by the latest version of the American National Standard "Automotive Lifts Safety Requirements for Construction, Testing, and Validation," ANSI/ALI ALCTV. Consult with an expert for any special regional structural and/or seismic anchoring requirements specified by any other agencies and/or codes such as the Uniform Building Code (UBC) and/or International Building Code (IBC).

Check your floor for the possibility of it being a post-tension slab. In this case, contact the building architect **before** drilling. Using ground penetrating radar may help you find tensioned steel.

**WARNING** Cutting through a tensioned cable can result in injury or death. Do not drill into a post-tension slab unless the building architect confirms you are **not** going to hit tensioned steel, or you have located it using ground penetrating radar. **If colored sheath comes up during drilling, stop drilling immediately**.



 Concrete Specifications XPR-9SBT Only. The XPR-9SBT is designed for flush mount and must be recessed, as per the figure below.

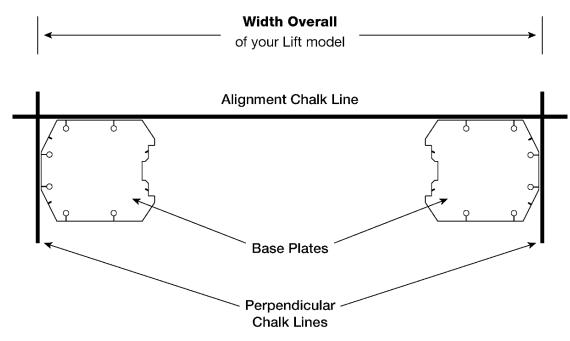
- **Unloading the components**. Unload the Lift components as close to the installation location as possible. The Lift includes a number of heavy pieces, so the closer you unload them to the installation location, the better off you will be.
- **WARNING** Some Lift components are very heavy; if handled incorrectly, they can damage materials like tile, sandstone, and brick. Try to handle the Lift components just twice: once when delivered and once when moved into position. You must have a Forklift or Shop Crane to move some of the Lift components into position. **Use care when moving Lift components**.

# **Creating Chalk Line Guides XPR-9TF Only**

Create Chalk Line Guides on the ground for the two Posts prior to moving them into position. Use the Width Overall value *for your Lift model* to determine where to place the Chalk Line Guides. The Width Overall value is the distance from the back of one base plate to the back of the other base plate. The **XPR-9SBT** anchoring was created when the concrete recess was formed, see pg. 17.

Lift Model	Width Overall
XPR-9TF Narrow	132″ (3,353 mm)
XPR-9TF Wide	145″ (3,683 mm)

The following drawing shows how to create Chalk Line Guides for your Lift.



Not to scale. Components removed for clarity.

#### To add the Chalk Line Guides:

- 1. Decide where you want to locate the Lift.
- Create an Alignment Chalk Line at the Front of the Lift. For Symmetric Lifts, see the drawing above.
  For Asymmetric Lifts, put the Alignment Chalk Line through the notches; see the drawing on the previous page.

Make the Alignment Chalk Line longer than the Width Overall setting for your Lift model.

Make sure to use the Width Overall setting for Narrow or Wide orientation.

3. Create two Perpendicular Chalk Lines at 90° angles to the Alignment Chalk Lines at the Width Overall distance for the Lift model you are installing.

The two Perpendicular Chalk Lines must be **X** distance from each other, where **X** is the Width Overall setting (Narrow or Wide, depending on your selection) for your Lift model.

4. Put the Base Plates into the corners created by the Chalk Line Guides, as shown in the drawing on this page.

## Install the Equalizing Cables

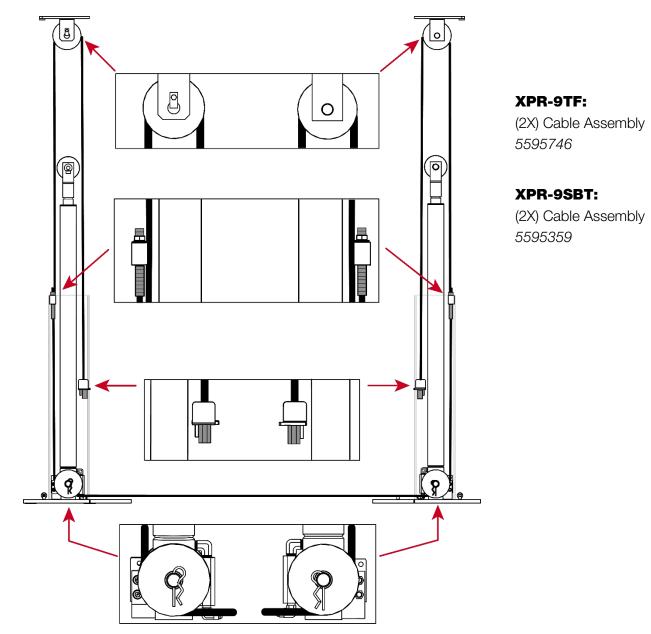
It is much easier to put the Equalizing Cables into position **before** you stand up the Posts.

The Equalizing Cables keep the Lift Heads synchronized. If one Lift Head lowers or raises faster than the other Lift Head; the Vehicle on the Lift would become unstable and could fall.

The following illustration shows an Equalizing Cable; the ends are exaggerated for clarity.

<i>Wide</i>	<b>Narrow</b>	Attaches at
configuration	configuration	top of Lift Head
Button	Button	Threaded
end	end	end

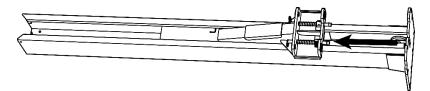
When Equalizing Cables are fully routed, they are mirror images of each other.



**CAUTION** BendPak recommends wearing gloves while handling the Equalizing Cables.

#### To put the Equalizing Cables into position:

- 1. Using a forklift or equivalent, move the Posts near the Chalk Lines.
- 2. Place both Posts either flat on the ground or with their tops elevated on a sawhorse or similar; the insides of the Posts need to be accessible, facing up.
- 3. Slide the Lift Heads away from the bottoms of both Posts by at least 24" (610 mm), to provide room to work.

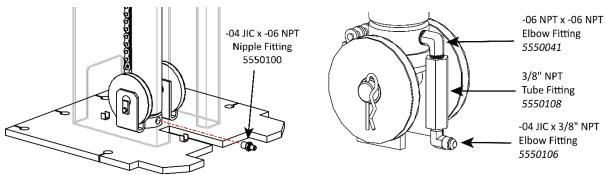


4. **XPR-9TF users**: remove the shipping plug from the Lift Cylinder port, then install a Nipple Fitting (5550100), making sure to use Thread Sealant on the NPT threads only.

**XPR-9SBT users**: remove the shipping plug from the cylinder port, then install three Cylinder Fittings, making sure to use Thread Sealant on NPT Threads only.

#### XPR-9TF:

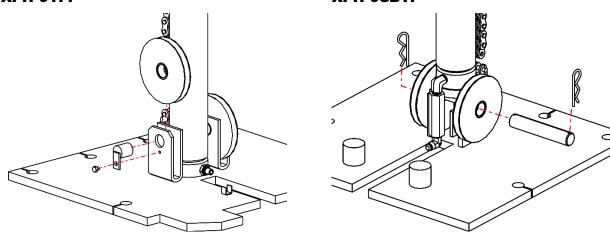
#### XPR-9SBT:



5. Remove the two Post Sheaves from the bottom of the Post. Keep the Cable Sheaves, Sheave Pins, and Hair Pins nearby; you will be re-installing them soon.

#### XPR-9TF:

#### XPR-9SBT:

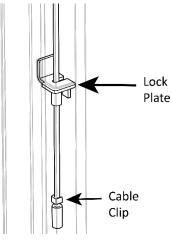


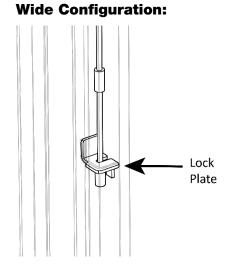
6. Locate the two Equalizing Cables.

For both lifts, the Equalizing Cables are the same length, so it does not matter which one you install first.

- 7. For **XPR-9TF** installations, determine the wide or narrow Button End you are going to use on the Cable.
- 8. Secure the Button end at the Carriage Lock Plate located inside each Lift Head.

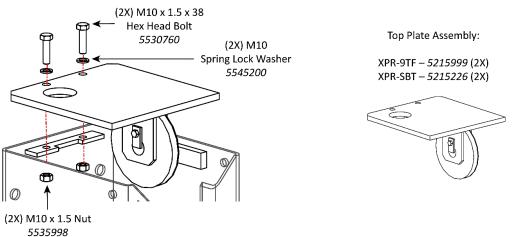
### **Narrow Configuration:**





CAUTION Failure to secure the Button end may result in Lifting Chain failure or Lift malfunction.

- 9. Route the threaded end of the Cable *upwards* to where the Top Plate Sheave is.
- 10. Install the Top Plates on the top of the Posts and thread the cable around the Sheave. Refer to the figure below to assemble.



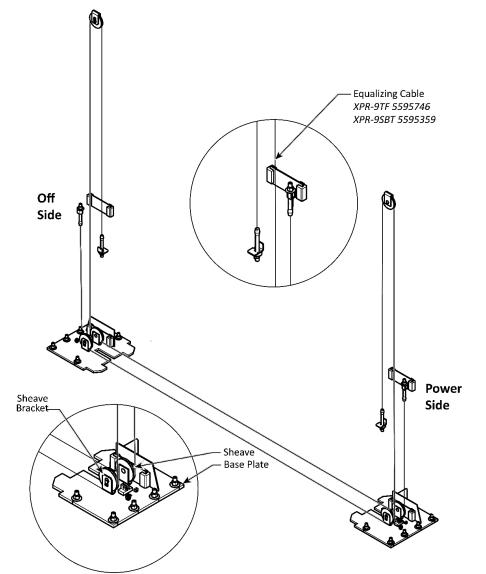
- 11. Route the Cable down the Lift Post and around the Sheave at the bottom of the Post and out to the Opposite Post.
- 12. Route the Cable around the bottom Sheave and up to the Lift Head.
- 13. Insert the threaded end of the cable into the Cable Holder. Use the Washer and Nut loosely secure the cable end to the Lift Head.

14. Retrieve the remaining Cable and repeat the procedure beginning on the opposite Post.

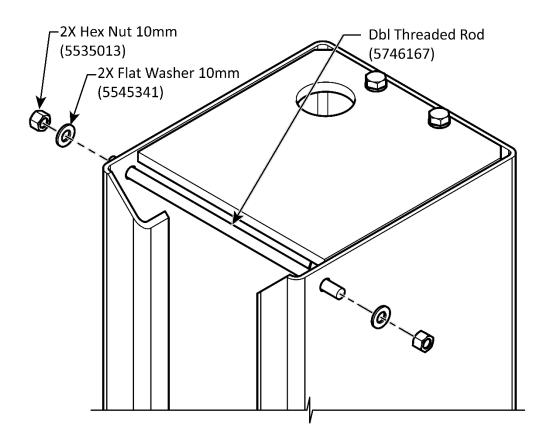
It can be difficult to get the Button End into the Slot, as it may be hard to reach the Lock Plate. You may want to use a metal rod or a long tool to push the Button End into the Slot.



- If you are having problems getting the Button end into the Slot, you might want to try pushing the Button end past the Lock Plate. Then move the Equalizing Cable around to get the cable into the Slot. Once the cable is in the Slot, pull on the other end of the cable to slide the Button end into the Slot. Try to keep the cable taut until the Equalizing Cable is connected at the other end.
- 15. After the Cables are in place. Reinstall all Sheaves and pins (first apply new Red Lithium Grease to the pins) that were removed.
- 16. Verify the Pulley plate at the top of each post is secured.
- 17. Move both Lift Heads back down to the bottom of each Post.



18. On **both** Lift Posts, locate the two Double Threaded Rods (M10 x 275 mm rods, threaded on both ends), two Nuts, and two Washers in the Parts Box, put them into place through the top of each Post (they go all the way through the top of the Post), and tighten them in place on both ends. Refer to the figure on the next page.

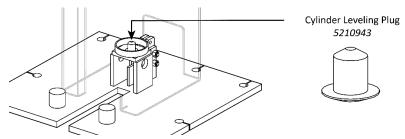


## Install the Cylinder Chain and Roller

The Lift Cylinder drives a Chain connected between the Base plate and the Lift Head.

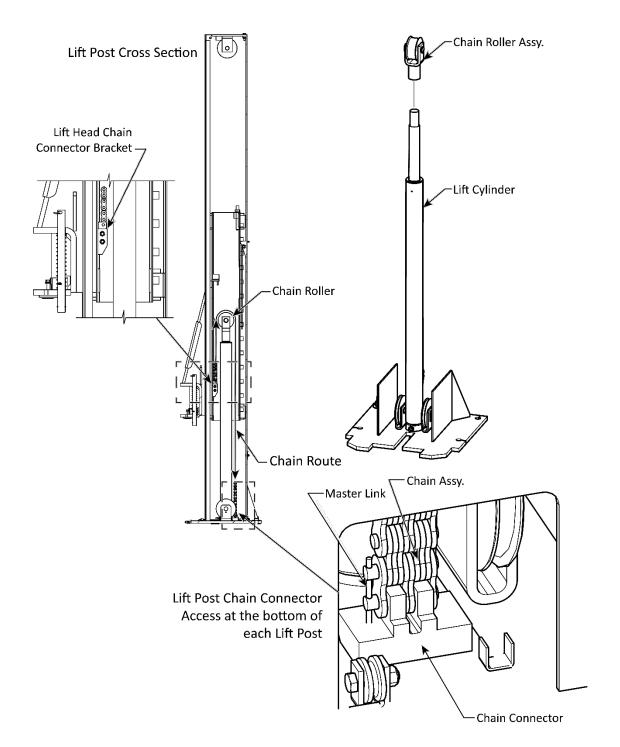
#### To install the Cylinder Chain:

- 1. Perform these operations while the Posts are on their side with the interior accessible and the Lift Head free to move.
- 2. Retrieve the Chain with its Master Links.
  - XPR-9TF Chain (5210251)
  - XPR-9SBT Chain (5210116)
- 3. On **XPR-9SBT** only, verify the Cylinder Leveling Plug is in Place. Refer to the figure below.



- 4. Place the Chain Roller Assembly (5210117) on the Lift Cylinder Rod.
- 5. Connect and secure one end of the Chain Assembly to the Base Plate anchor using the Master Link.
- 6. Thread the Chain around the Chain Roller and through the Lift Head.

7. Anchor the end of the Chain to the Lift Head Connector Bracket on the inside of the Lift Head. Refer to the figure below.



8. Visually inspect the Lift Head Chain is properly positioned with the Lift Head Chain Sheave.

## **Anchoring the Posts**

We strongly recommend having multiple people work together to install the Posts.

**DANGER** Pay *special* attention when installing the Posts. If done incorrectly, the Lift could fall over, potentially causing damage to the Vehicle, the Lift, and injuring bystanders.

Concrete specifications are:

- **Depth**: 4.25" (108 mm) thick; minimum
- **PSI**: 3,000 psi, minimum
- Cured: 28 days, minimum

Anchor Bolt specifications are:

- **Length**: 6.3" (160 mm)
- **Diameter**: .75" (19 mm)
- Anchor torque: 85 to 95 ft. lbs.
- Effective embedment: 3.25" (82.5 mm) or more

The Concrete floor where you want to install your Lift must meet the following requirements:

- The floor must be a flat, Concrete floor. It must be level; do not install the Lift on a surface with more than three degrees of slope.
- Do not install the Lift on cracked or defective Concrete.
- Check the floor for the possibility of it being a post-tension slab. In this case, contact the building architect or the local department of building and safety before drilling. Using ground penetrating radar may help you find the tensioned cable.
- **WARNING** Cutting through a tensioned cable can result in injury or death. Do not drill into a post-tension slab unless the building architect confirms you are **not** going to hit a tensioned cable, or you have located it using ground penetrating radar. **If colored sheath comes up during drilling, stop drilling immediately**.

# WARNING Your Concrete and Anchor Bolts *must* meet these specifications. Only install your Lift on a Concrete surface. If you install a Lift on asphalt or any other surface, or your Concrete or Anchor Bolts do not meet these specifications, it could lead to product damage, Vehicle damage, personal injury, or even loss of life.

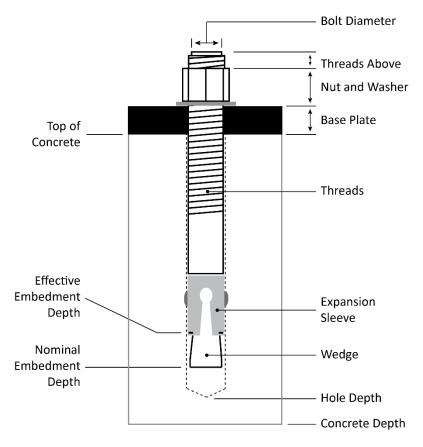
BendPak Lifts are supplied with installation instructions and concrete fasteners meeting the criteria as prescribed by the latest version of the American National Standard "Automotive Lifts – Safety Requirements for Construction, Testing, and Validation."

# **WARNING** Use only the ALI-certified Anchor Bolts that came with your Lift. If you use components from a different source, you void your warranty and compromise the safety of everyone who installs or uses the Lift.

Lift buyers are responsible for conforming to all regional, structural, and seismic anchoring requirements specified by any other agencies and/or codes, such as the Uniform Building Code and/or International Building Code. In the event that the existing concrete floor does not meet the minimum requirements **BendPak strongly recommends consulting a Concrete Specialist early in your planning process for the Lift installation**. The recommendations presented in this manual are generic in nature and cannot cover all situations. A Concrete Specialist will adjust these recommendations to account for national, state, and local building codes as well as local weather conditions, soil composition, base preparation, load bearing, seismic requirements and any other structural concerns that may arise.

*Effective Embedment* is the location in the Hole where the Expansion Sleeve presses into the Concrete. This is where the Anchor Bolts get their holding strength, the further down into the Hole, the greater the holding strength.

**Nominal Embedment** is how far down into the Hole the bottom of the Anchor Bolt is, which does not tell you anything about the holding strength.



Not to scale. Components removed for clarity.

#### To install the Posts:

- 1. Using a Forklift or Shop Crane, move the Posts to the Chalk Line Guides you created earlier.
- 2. Stand up each Post, one at a time, and move it to the appropriate location.
- 3. Double check your measurements against the **Specifications** for your Lift model:
  - Distance from back of one Base Plate to back of the other Base Plate: Width Overall value
  - Distance from inside of one Post to inside of the other Post: Inside Posts value
- 4. Using the Base Plates as guides, drill each hole **4.5**<sup>"</sup> deep; use a masonry bit.

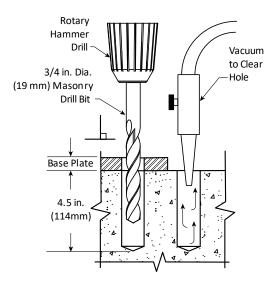
Do not drill all the way through the Concrete; if you punch completely through the slab, you could compromise the holding strength of the Anchor Bolts.

Drill in straight; do not let the drill wobble.

The diameter of the drill bit must be the same as the diameter of the Anchor Bolt. If you are using a  $\frac{34''}{4}$  diameter Anchor Bolt, for example, use a  $\frac{34''}{4}$  diameter drill bit.

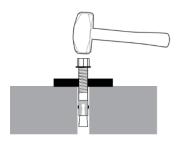
- 5. Vacuum each hole clean. BendPak recommends using a Vacuum to get the hole very clean.
- WARNING You must use the appropriate safety gear including safety glasses, dust masks, gloves, steel-toed work boots and heavy work clothes when anchoring the Posts.

You can also use a wire brush, hand pump, or compressed air; just make sure to thoroughly clean each hole.



Do not ream the hole. Do not make the hole any wider than the drill bit made it.

- **Important**: The holding strength of an Anchor Bolt is partially based on the how cleanly the Expansion Sleeve presses against the Concrete. If the hole is dirty or too wide, there is less holding strength.
- 6. Make sure the Washer and Nut are in place, then insert the Anchor Bolt into the hole.



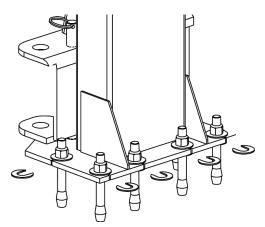
The Expansion Sleeve of the Anchor Bolt may prevent the Anchor Bolt from passing through the hole in the Base Plate; this is normal. Use a hammer or mallet to gently tap the Expansion Sleeve through the Base Plate and into the hole.

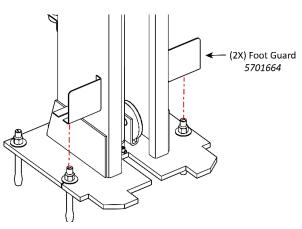
Even using a hammer or mallet, the Anchor Bolt should only go into the hole part of the way; this is normal. If the Anchor Bolt drops in with little or no resistance, the hole is too wide.

Once past the hole in the Base Plate, the Anchor Bolt eventually stops progressing down into the hole as the Expansion Sleeve contacts the sides of the hole; this is normal.

7. Hammer or mallet the Anchor Bolt the rest of the way down into the hole; stop when the Washer is snug against the Base Plate.

8. Plumb each Post; install Foot Guards, any required Shims and or the optional Height Adapter Trays.





Torque

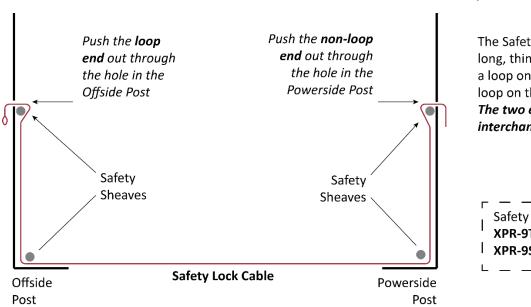
90 ft. lbf

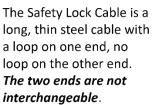
- 9. Wrench each Nut *clockwise* to the recommended installation torque, 85 to 95 ft. lbs., using a Torque Wrench.
- **Important**: Do *not* use an impact wrench to torque the Anchor Bolts.

# **Routing the Safety Lock Cable**

The following procedure describes how to put the Safety Lock Cable into place; it does **not** describe how to attach it to the Safety Lock Assemblies.

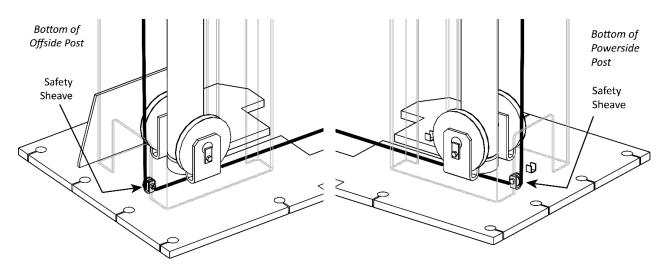
The following drawing shows the path the Safety Lock Cable travels to each Safety Assembly.







Drawing not to scale. Components removed for clarity. The Safety Assemblies are not installed at this point, so the Safety Lock Cable, after being routed, will simply stay in place until later in the installation.



#### To route the Safety Lock Cable:

- 1. Locate the Safety Lock Cable for your Lift.
- 2. **Starting on the inside of the Offside Post**, push the **loop end** of the Safety Lock Cable out through the opening in the Offside Post; leave the loop end hanging out of the hole, for now.
- 3. Route the other end (the non-loop end) of the Safety Lock Cable over the Safety Sheave, downwards on the inside of the Offside Post, under the Safety Sheave at the bottom of the Offside Post, across the Lift floor, under the Safety Sheave at the bottom of the Power Side Post, then upwards, on the inside of the Power Side Post, towards the Mounting Bracket.
- 4. **On the Power Side Post**, when the **non-loop end** of the Safety Lock Cable is near the Mounting Bracket, route it over the Safety Sheave, then push it through the opening in the Power Side Post.
- 5. The Power Side Safety Assembly is not yet installed, so just leave the non-loop end of the Safety Lock Cable hanging out of the hole. Both ends of the Safety Lock Cable will be appropriately connected during the procedure to install the Safety Assemblies.

# CAUTION When connecting the ends of the Safety Lock Cable later in the installation, make sure the Cable stays in all of the Safety Sheaves. This keeps it out of the way of the Hydraulic Hoses and Equalizing Cables.

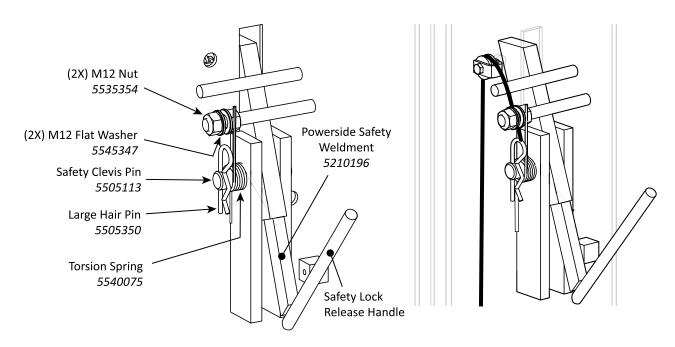
## **Connecting the Safety Lock Cable – XPR–9TF only**

Your XPR-9 Series Lift has two Safety Assemblies: one on the Power Side Post (above the Power Unit) and the other on the Offside Post.

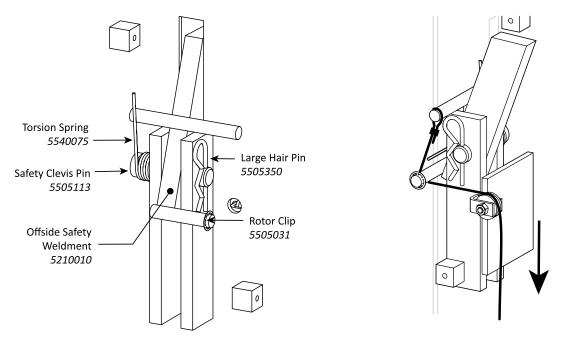
The Safety Assemblies take the Lift off of its Safety Locks so the Lift Arms can be lowered. The Safety Assemblies need to be disengaged at the same time so that the Lift Arms lower together. In order to do this, the two Safety Assemblies are connected to each other via the Safety Lock Cable.

Routing the Safety Lock Cable was done earlier; refer to **Routing the Safety Lock Cable** for additional information.

The **Power Side Safety Assembly** includes a Safety Lock Release Handle, which angles up and is used to lower the Lift.



The **Offside Safety Assembly** is mostly the same as the Power Side Safety Assembly, *except* that it does not have a handle.



The procedures for installing the Power Side Post and the Offside Post Safety Assemblies are similar, but not exactly the same.

Use the illustrations on the previous page to complete the procedures below.

#### To install the two Safety Assemblies:

1. **Starting on the Power Side Post**, locate the Safety Assembly **with** the Safety Lock Release Handle, a Safety Clevis Pin, a Torsion Spring, and a Hair Pin.

Refer to the previous drawings for locations of the components of the Safety Assemblies.

- 2. Insert the Safety Clevis Pin, from the right, through the hole in the right welded plate, then through the Power Side Safety Weldment, and then through the left welded plate.
- 3. Position the Torsion Spring on the left end of the Safety Clevis Pin, then install the Hair Pin on the end of the Safety Clevis Pin.
- 4. Repeat Steps 1 through 3 for the Offside Safety Assembly on the Offside Post.

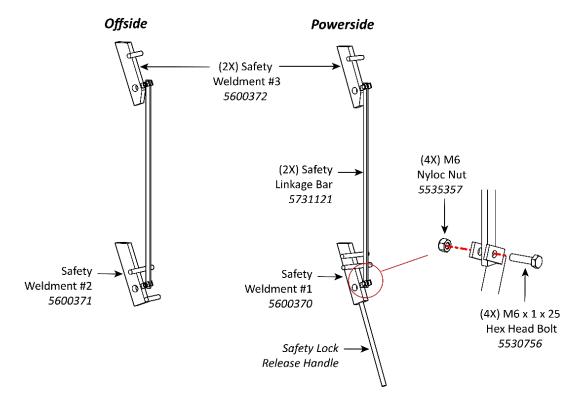
#### To connect the Safety Lock Cable:

- 1. **Starting on the Offside Post**, route the loop end of the Safety Cable over the short, lower Welded Pin, past the Safety Clevis Pin, and loop it over the right end of the longer, Welded Pin.
- 2. Secure a Rotor Clip to the short, lower Welded Pin to keep the Cable in place.
- 3. **Moving to the Power Side Post**, screw two Nuts and Washers onto the threaded end of the Welded Pin with Threads. Make sure that one Nut and one Washer is on each side of the hole in the Welded Pin with Threads.
- 4. Put the non-loop end of the Safety Cable over the front of the Welded Pin and into the hole in the Welded Pin with Threads, between the two Nuts and the two Washers.
- 5. Pull any slack out of the Safety Cable, then tighten the Nuts.
- **CAUTION** When tightening the Nuts, keep tension on the Safety Cable and keep the Safety Cable centered between the two Nuts.
- 6. Operate the Safety Lock Release Handle, checking for proper operation of both Safety Assemblies.
- **DANGER** Verify that both the Power Side and the Offside Safety Assemblies engage properly **before** operating the Lift.

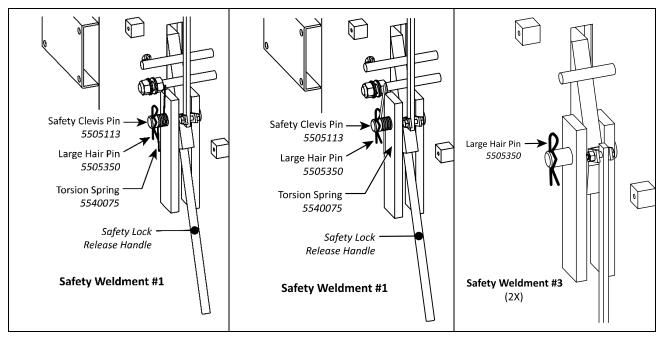
## **Connecting the Safety Lock Cable – XPR-9SBT**

The procedures for installing the Power Side and Offside Safety Assemblies are similar to that of the XPR-9TF; the main differences include two Safety Assemblies per each Post and adding a Safety Bar that links the Safety Assemblies on each Post.

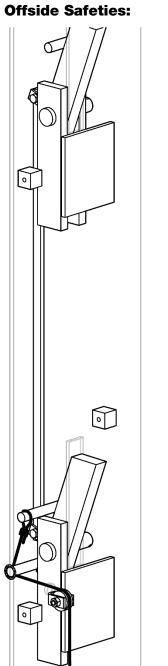
The following illustration shows the XPR-9SBT Safety Assemblies.

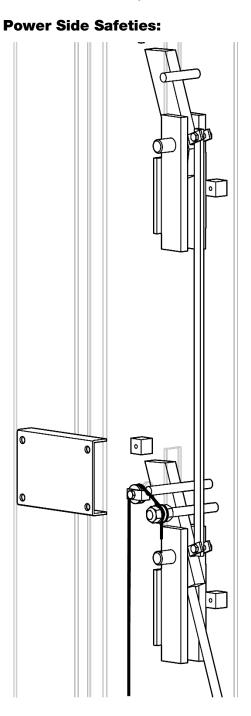


The following illustrations shows how to assemble the Safety Assemblies.



The following illustration details the Safety Lock Cable connections to the Safety Assemblies.





Use the illustrations on the previous page to complete the following procedures below.

#### To install the Safety Assemblies:

- 1. Locate the four Safety Assemblies, two Linkage Bars, four Clevis Pins, four Large Pins, and Torsion Springs.
- 2. Join the Offside Safety Assemblies (Safety Weldment #2, Safety Weldment #3) using the Linkage Bar, as shown in the previous illustrations.
- 3. Join the Power Side Safety Assemblies (Safety Weldment #1, Safety Weldment #3) using the second Linkage Bar, as shown in the previous illustrations.

The Safety Assembly with the Safety Lock Release Handle *must* go to the Power Side Post.

- 4. **Starting at the Power Side Post:** position the Safety Weldment #1 in place on the Post, insert the Safety Clevis Pin, from the right, through the hole in the right welded plate in the Power Side Post, then through the Power Side Safety Weldment, and then through the left welded plate.
- 5. Position the Torsion Spring on the left end of the Safety Clevis Pin, then install the Hair Pin on the end of the Safety Clevis Pin.
- 6. For the Top Safety Assembly, position the Safety Weldment #3 in place on the Post, insert the Safety Clevis Pin, from the right, through the hole in the right welded plate in the Power Side Post, then through the Safety Weldment, and through the left welded plate.
- 7. Install a Hair Pin on the end of the Safety Clevis Pin to secure it in place.
- 8. Repeat Steps 1 through 7 for the Offside Safety Assemblies on the Offside Post.

#### To connect the Safety Lock Cable:

- 1. **Starting at the Offside Post,** route the loop end of the Safety Cable over the short, lower Welded Pin (Safety Weldment #2), past the Safety Clevis Pin, and loop it over the right end of the longer, Welded Pin.
- 2. Secure a Rotor Clip to the short, lower Welded Pin to keep the Cable in place.
- 3. **Moving to the Power Side Post**, screw two Nuts and Washers onto the threaded end of the Welded Pin with Threads (Safety Weldment).

Verify that one Nut and one Washer is on each side of the opening in the Welded Pin with Threads.

- 4. Put the non-loop end of the Safety Cable over the front of the Welded Pin and into the holes in the Welded Pin with Threads, between the two Nuts and the two Washers.
- 5. Pull any slack out of the Safety Cable, then tighten the Nuts.
- **CAUTION** When tightening the Nuts, keep tension on the Safety Cable and keep the Safety Cable centered between the two Nuts.
- 6. Operate the Safety Lock Release Handle, checking for proper operation of both Safety Assemblies.

# **DANGER** Verify that both the Power Side and the Offside Safety Assemblies engage properly **before** operating the Lift.



*Hydraulic Fluid Contamination poses a serious issue for your Lift*; contaminants such as water, dirt, or other debris can get into the Hydraulic Hoses and Fittings on the Lift, making your new Lift inoperable and unusable.

Your Lift is shipped with clean components; however, BendPak strongly recommends that you take secondary precautions and clean all Hydraulic Hoses and Fittings prior to making connections. It is better and less costly to take these extra steps now so that you do not need to take your Lift out of service later to fix issues that could have been prevented at the time of installation.

There are several ways to clean Hydraulic Hoses and Fittings:

- **Compressed Air**. Use an air compressor to blow out contaminants from each Hydraulic Hose and Fitting prior to installation. Clean, dry air is preferred. Wear ANSI-approved eye protection (safety glasses, goggles, or face shield) when using compressed air for cleaning. Never point an air hose nozzle at any part of your body or any other person.
- **Fluid Flushing**. As long as the Hydraulic Fluid is clean and compatible with the system fluid, you can flush Hoses and Fittings to create turbulent flow and remove particulates. Always ensure that the fluid itself is contaminant-free.

#### Some additional steps that will help keep the Hydraulic Fluid clean:

- **Remove old thread seal tape**. Some ports on the Hydraulic Cylinders are shipped with temporary plugs secured with thread seal tape, so make sure to thoroughly remove any leftover thread seal tape that may inadvertently enter the Hydraulic System.
- Use a liquid thread sealant only. Liquid thread sealant (Loctite<sup>™</sup> 5452 or similar) is recommended. Do not use thread seal tape on any fitting. Liquid thread sealant is recommended for NPT connections, fine for JIC connections, but *not* necessary for O-ring (ORB) connections.
- Always use clean equipment. If you use a dirty bucket or funnel to transfer the Hydraulic Fluid into the Hydraulic Fluid Reservoir, the contaminants will likely be introduced into the Fluid. When using cleaning rags, use a lint-free rag.
- **Proper storage**. Keep the Hydraulic Fluid sealed in its container until ready for use; store the Fluid in a clean, dry, and cool area.
- **Cover the Hoses and Fittings**. Before installation, do not leave the ends of the Fittings exposed; the same applies for the Hydraulic Hoses. As a general rule, keep the Hydraulic Hoses and Fittings capped and in a clean area until ready for use.
- **Filter the new Hydraulic Fluid**. Just because it is new does not mean it is *clean*. Use an offline filtration cart or kidney loop system to make sure the Hydraulic Fluid is clean before being transferred into the Hydraulic Fluid Reservoir (even using a heavy-duty nylon mesh screen is better than trusting what is left at the bottom of the barrel).
- Avoid mixing different types of Hydraulic Fluid. If Hydraulic Fluid needs to be replaced, make sure to flush the Hydraulic System of the old Hydraulic Fluid before you add the replacement Fluid; do not mix the two together.

#### **Hydraulic System Warnings** Before applying power to the Hydraulic System note the following Warnings:

- **WARNING** Failure to observe these warnings can result in serious personal injury including, in rare cases, death.
- **WARNING** The Hydraulic hoses and connections **must** be inspected before any attempt to raise a Vehicle is made.
- **WARNING Verify** all Hydraulic Hose connections and fittings, including unused auxiliary port plugs on the Power Unit, the Flow Divider, the Cylinders and anywhere else in the Hydraulic System are tightened.
- **WARNING** The Power Unit is a Hydraulic Pump capable of developing pressures in excess of 5,000 psi (345 BAR). A pressure relief valve is used to set the pressure at the desired level. Tampering with, adjusting, modifying, or removing the relief valve is extremely dangerous and is prohibited. Only trained Hydraulics technicians should adjust the relief valve, using calibrated hydraulic pressure gauges to assure the proper pressure setting is achieved.
- **WARNING** Changes to the output pressure may render the power unit incompatible with pressure limitations of other components in the hydraulic circuit. This may cause catastrophic failure of those components, and could result in property damage, serious personal injury, or death.
- **WARNING** The Hydraulic System can contain high pressure which, if suddenly released, can cause serious injury or death.
- **WARNING** Do **not** attempt to connect or disconnect Hydraulic Hoses while the equipment is loaded or while a Vehicle is on the Lift, or the Hydraulic System is under pressure.
- **WARNING** Keep bare hands away from Hydraulic Fluid; always wear gloves when handling Hydraulic Fluid, Cylinders or Hydraulic Hoses.
- **WARNING** When handling Hydraulic Fluid, always observe the safety instructions from the manufacturer.
- **Always** promptly clean any Hydraulic Fluid spills. If a leak is the source of the spill, lockout the Lift to prevent use until the Hydraulic System is repaired.

# **About Thread Sealants**

Liquid Thread Sealant lubricates and fills the gaps between the Fitting threads and leaves no residue that could contaminate the Hydraulic Fluid. Other types of Thread Sealants (like Teflon Tape) can shred during installation or removal and eventually enter the Hydraulic System. Thread Sealant can be used with most Hydraulic Fittings, although you probably only need to use it with NPT connectors.

#### To apply Thread Sealant:

1. Apply the thread sealant when the ambient temperature is between +46.5°F to +70°F (+8°C to 21°C). Make sure the Fittings and connectors you are going to use are clean and dry.

- 2. If you are adding Thread Sealant to a Fitting or connector that has already been used with a different sealant, use a wire brush to thoroughly remove the old sealant before adding more.
- 3. Skipping the top thread, apply a small amount of Thread Sealant to the next four threads of the Fitting.

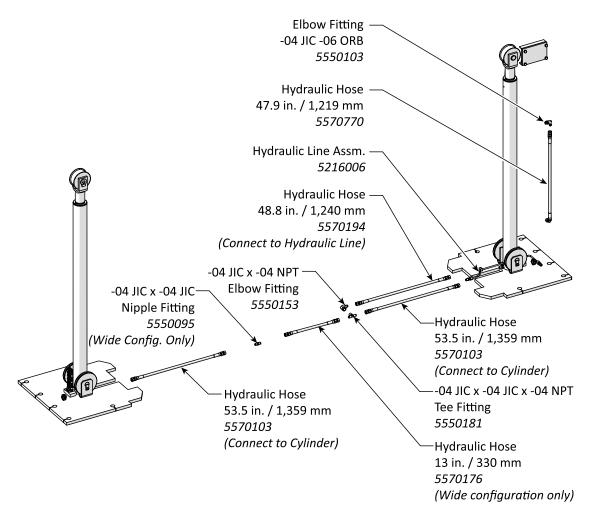
You only need a small amount because the sealant spreads to the other threads as it is tightened into place.

If you put too much, the excess liquid will be pushed out when the Fitting is tightened; use a rag to wipe the excess.

- 4. Tighten the Fitting into the connector; do **not** over tighten the Fitting.
- 5. Allow the manufacturer-recommended curing time before pressurizing the system.

# **Routing the Hydraulic Hoses – XPR-9TF**

The following illustration details the XPR-9TF Hydraulic Hose connections to the Hydraulic Cylinders.

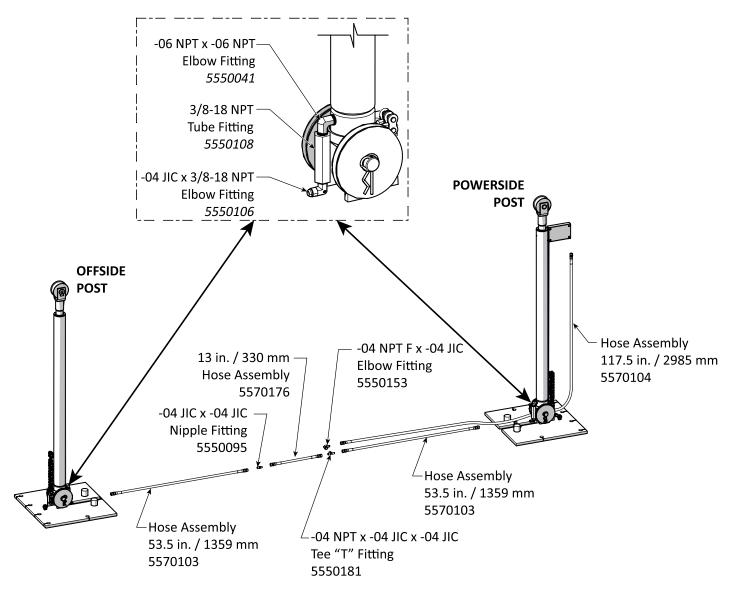




Always wear the proper protective equipment when handling Thread Sealant.

# **Routing the Hydraulic Hoses – XPR-9SBT**

Hydraulic Hoses move Hydraulic Fluid to and from the Hydraulic Cylinders at the bottom of each Post. Refer to the figure below when connecting the Hydraulic Hoses to the Hydraulic Cylinders on the XPR-9SBT.



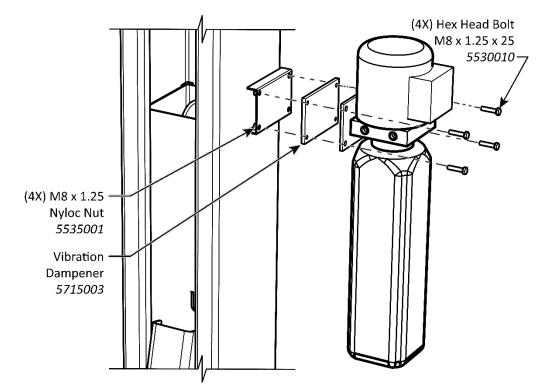
Not to Scale. Components removed for clarity.

## **Mounting the Power Unit**

This section describes how to mount the Power Unit for your Lift. You do **not** need an Electrician to **mount** the Power Unit, but you do need an Electrician to **connect** the Power Unit to the facility's electrical service.

**Important**: Do not connect the Power Unit to the Hydraulic System or to the power source at this point in the installation; those connection will be made later.

The Power Unit *must* be mounted on the Mounting Bracket on the Power Side Post.



#### To mount the Power Unit to the Power Side Post:

- 1. Find the supplied M8 hardware and the Vibration Dampener.
- 2. Carefully remove the Power Unit from the shipping material.

# **CAUTION** The Power Unit is heavy. BendPak recommends having one person hold the Power Unit while a second person bolts it into place.

- 3. Position the Vibration Dampener into place next to the Mounting Bracket on the Power Side Post.
- 4. Move the Mount Plate on the back of the Power Unit next to the Vibration Dampener.
- 5. Push one of the Bolts through a hole in the Mount Plate, through the Vibration Dampener, and into the Mounting Bracket; attach a Nut to the thread end of the Bolt, then tighten the Nut.
- 6. Repeat Step 4 for the other three Bolts and Nuts.

## **Connecting the Hydraulic Hoses**

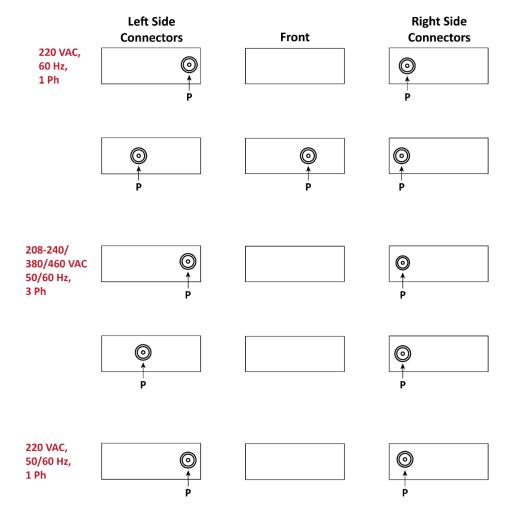
Some of the Hydraulic Lines were put into place much earlier in the installation. It is now time to finish routing and installing them.

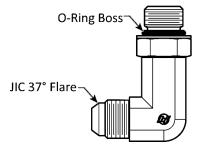
This section covers connecting the Elbow Fitting that connects to the Power Unit.

The following procedure assumes the Hydraulic Lines were put into position earlier in the installation. Refer to **Routing Hydraulic Lines** for more information. If they were **not** put into position earlier, you must do so now, **before** beginning the following procedure.

#### To finish connecting the Hydraulic Lines:

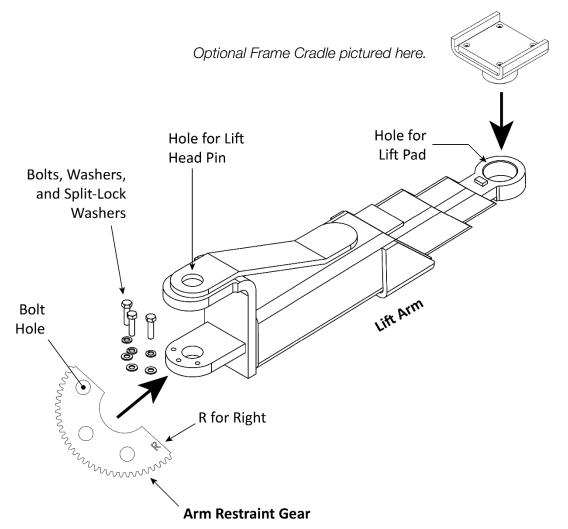
- 1. Locate the Short Hydraulic Line and the remaining Elbow Hydraulic Fitting.
- On the Power Unit, locate a hydraulic pressure out port on the Power Unit (labeled P, P1, or P2), remove the shipping plug. Place a few drops of hydraulic fluid on the O-Ring of the Elbow Hydraulic Fitting (06 ORB to 06 JIC) and install in the P1 or P2 port of the Power Unit.
- 3. The figure below shows locations of the Hydraulic Pressure Ports on the Power Units that are available for the XPR-9 Series of Lifts.
- 4. Connect the Hydraulic Hose to the Elbow just installed.





# **About Arm Restraint Gears**

Arm Restraint Gears get installed on each Lift Arm.



The Arm Restraint Gears are intended to hold the Lift Arms in place laterally (once they mesh with the Gear Stops) as the Lift Arm rises from the ground up to where the Lift Pads contact the manufacturer's recommended Lifting Points.

When the Lift is fully lowered, the Arm Restraint Gears are **not** meshed with the Gear Stops on the Lift Head. This allows movement for the Lift Arms to position them correctly under the Vehicle. When the Lift begins to rise, the Arm Restraint Gears mesh with the Gear Stops.

**Important**: Arm Restraint Gears do not keep the Lift Arms from moving once the weight of the Vehicle is on the Lift Arms. Arm Restraint Gears are designed to maintain the position of *unloaded* Lift Arms up to 150 lbs. of horizontal (side to side) force. Put another way, Arm Restraint Gears keep the Lift Arms from moving laterally from just above the ground, when they mesh with the Gear Stops, until the Lift Pads start holding the weight of the Vehicle being raised.

XPR-9 Series Arm Restraint Gears have an R imprinted on one side and an L imprinted on the other side. Before installing an Arm Restraint Gear, determine whether it is going to be a 'left' arm or a 'right' arm (described in **Installing Lift Arms**) and install the Arm Restraint Gear accordingly.

## **Installing Lift Arms**

Lift Arms are what contacts the Vehicles to raise them off the ground. Your Lift comes with four Lift Arms.

There are several rules that govern which Lift Arms go where on a particular Lift.

To determine the Front and Rear of the Lift:

- If you can only drive in one way. The approach side is the Rear, the other side is the Front.
- If you can drive in either way. Choose one side as the Front and the other side as the Rear. The best way to make this decision is to pick one approach direction for the Vehicles you will be putting on the Lift, even though you can drive in either way. Once the decision is made, you approach the Lift from the Rear, so the other side is the Front.

Determine whether the Lift Arm is a 'right' or a 'left.' This is determined separately per Post.

To determine right and left, stand between the two Posts, then turn to face one of them straight on. From this viewpoint, the right side of the Post is the 'right' and the left side of the Post is the 'left.'

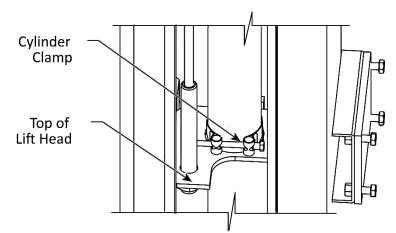
> Front Front Front Front Front Front Rear Approach

After finishing the first Post, repeat the process for the second Post.

The 'left' and 'right' designation comes into play when installing the Arm Restraint Gears on a Lift Arm. Once you install an Arm Restraint Gear on a Lift Arm, that Lift Arm can only be correctly used on the side you specified. For example, if you install an Arm Restraint Gear on a Lift Arm as Left, then it will not work correctly if you put that Lift Arm on the Right side of a Lift Head.

## Install the Cylinder Clamps

Verify the cylinder clamps are positioned at the top of the lift head and secured one on each cylinder! Do not operate the Lift if the cylinder clamps are not secured on the hydraulic cylinders.



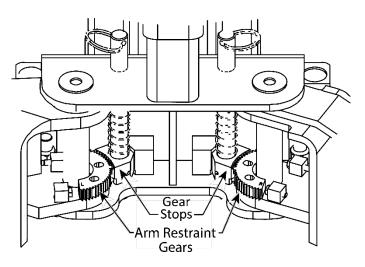
#### To install an Arm Restraint Gear on a Lift Arm:

- 1. Find the Lift Arm, Arm Restraint Gear, three Bolts, three Washers, and three Split-Lock Washers.
- 2. Determine whether the Lift Arm is a 'left' or 'right' Lift Arm.
- 3. Turn the Arm Restraint Gear so that the L is facing up if the Lift Arm is a 'left' or the R is facing up if the Lift Arm is a 'right.'
- 4. Put the Arm Restraint Gear into place over the holes in the Lift Arm.
- 5. Put one of the Split-Lock Washers and Flat Washers onto a Bolt, then push that Bolt down through one of the holes in the Arm Restraint Gear and into the appropriate hole in the Lift Arm.
- 6. Using an appropriate tool, lightly tighten the Bolt into place.

Allow the Arm Restraint Gear to stay in place, while leaving a little play. This makes it easier to mesh the Arm Restraint Gear and the Gear Stop when installing the Lift Arm into a Lift Head.

7. Repeat Steps 5 and 6 for the other two Bolts.

The Lift Arm is ready to be installed into the Lift Head.



#### To install a Lift Arm in a Lift Head:

- 1. Using a forklift or shop crane, raise the desired Lift Head at least three inches off the ground. You need that room to work.
- 2. Move the appropriate Lift Arm into place in the Lift Head.

The holes at the end of the Lift Arm need to be inside the Lift Head and lined up with the holes in the Lift Head.

3. Slide a Lift Head Pin through the holes in the Lift Head and the Lift Arm.

The bottom of the Lift Head Pin needs to come out below the bottom hole in the Lift Head.

You may need to move the Lift Arm around a little to fully align the holes so that the Lift Head Pin goes through all of the holes.

- 4. Push a Snap Ring into its grooves on the bottom of the Lift Head Pin.
- 5. Make sure the Arm Restraint Gears and the Gear Stop are meshing.
- 6. When the Arm Restraint Gears and the Gear Stop are meshing, fully tighten the Bolts holding the Arm Restraint Gears to 60 to 70 lb. ft of torque.
- 7. Extend the Lift Arm as far as it will go and apply approximately 150 lbs. of pressure.

The Lift Arms should not move, and the Arm Restraint Gears and the Gear Stop should stay meshed.

If they do not, take the Lift Arm off and start the process again.

- 8. Repeat these steps for the other three Lift Arms.
- **WARNING** Make sure that the Arm Restraint Gears and the Gear Stops are meshing and staying in place when up to 150 lbs. of lateral force is applied before putting the Lift into normal operation.

# **Contact the Electrician**

As mentioned previously, there are installation tasks that require a licensed Electrician.

#### A licensed Electrician must perform all wiring.

The Electrician needs to:

- **Connect to power**. The Power Unit comes with a pigtail for wiring to a power source. Have your Electrician connect a power cord with plug to the electrical box on the Lift (for connection to a power outlet) or have them wire it directly into the electrical system at the Lift location.
- **Connect the Microswitch to the Power Unit**. The Microswitch (which is next to the Safety Shutoff Bar) has to be wired to the Power Unit. The necessary wiring is included.
- **Install a Power Disconnect Switch**. Ensures you can quickly and completely interrupt electrical power to the Lift in the event of an electrical circuit fault, emergency situation, or when equipment is undergoing service or maintenance. You must put it within sight and easy reach of the Lift operator. Refer to **Installing a Power Disconnect Switch** for more information.
- Install a Thermal Disconnect Switch. Ensures the equipment shuts down in the event of an overload or an overheated motor. Refer to Installing a Thermal Disconnect Switch for more information.

These installation tasks are described in detail in the following sections.

The Electrician is responsible for providing:

- A power cord and appropriate 220 VAC plug for connecting to an appropriate power source or the items required to connect to the facility's power system.
- A Power Disconnect Switch.
- A Thermal Disconnect Switch.

Additional information is supplied in the sections describing these tasks.

# **Electrical Information**

#### 

A licensed Electrician must perform all wiring. Do not perform any maintenance until main electrical power has been disconnected from the Lift and cannot be reenergized until all procedures are complete.

Important electrical information:

- Improper electrical installation can damage the Power Unit motor, which is not covered by the warranty.
- The Lift uses electrical energy; if your organization has Lockout/Tagout policies, make sure to implement them after connecting to a power source.
- Use a separate circuit breaker for each Power Unit.
- Protect each circuit with a time delay fuse or appropriate circuit breaker for the power unit in use:
  - 208 to 230 VAC, *single phase* circuit.
  - 208 to 230 VAC, *three phase* circuit.
  - 380 to 440 VAC, *three phase* circuit.

## **Connecting the Power Unit**

The Power Unit and the Microswitch must be connected to an appropriate power source.

All wiring **must** be performed by a licensed Electrician in accordance with local and national electrical codes. Do not perform any maintenance or installation on the Lift without first making sure that main electrical power has been disconnected from the Lift and cannot be re-energized until all procedures are complete. The Lift uses electrical energy; if your organization has Lockout/Tagout policies, make sure to implement them after connecting to a power source.

There are several things you need to do to get your Power Unit ready for normal operation:

- Mount the Power Unit to the Power Side Post. Already done, described in Mounting the Power Unit.
- Attach the Hydraulic Line to the correct location on the Power Unit. Already done, described in **Routing Hydraulic Lines**.
- Wire the Microswitch. Already done, described in Wiring the Microswitch.
- Attach the Power Unit and Microswitch to a power source. Covered in this section.
- Fill the Hydraulic Fluid reservoir. Covered in this section.

# **Power Units**

Your XPR-9 Series Lift is available with one of any of the following types of Power Units:

- 220 VAC, 60 Hz, 1 Phase. 220 VAC, for North American countries (U.S., Mexico, Canada).
- 208-240/380/460 VAC, 50/60 Hz, 3 Phase. 3 Phase, multiple voltages available.
- 220 VAC, 50/60 Hz, 1 Phase. 220 VAC, for countries outside North America.

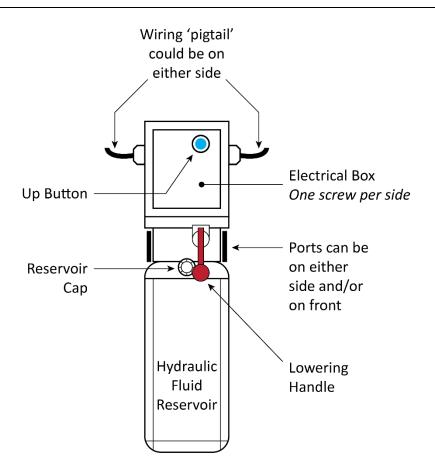
110 VAC Power Units are **not** available for XPR-9 Series Lifts.

Specialized 3 Phase, Low RPM Power Units are also available on request.

Some Power Units are provided by different vendors so there may be minor differences in look and feel. Nevertheless, all Power Units of the same type provide the same level of functionality.

All Power Units come with a 'pigtail' coming out of the Electrical Box. To install your Power Unit, remove the pigtail and connect the Electrical Box to the electrical system at your location or to an appropriate power cord with plug.

The following drawing is a front view of a Power Unit. Your particular Power Unit may look somewhat different based on what type you purchased.



Not to scale. Your Power Unit may be slightly different.

**Note**: The Up Button shown in the drawing above could be in a different location on the unit or could be a switch instead of a button, depending on the Power Unit you have.

Make clear to your Electrician that all electrical work **must** conform to applicable local, state, and federal codes, rules, and regulations.

#### To prepare the Power Unit:

- 1. Have the Electrician locate the Pigtail coming out of the Electrical Box on the Power Unit.
- 2. Open the Electrical Box, remove the Pigtail, and then either:
  - Wire the Power Unit directly into the facility's electrical system.
  - Wire a power cord (with appropriate plug) *inside the Electrical Box* to the wiring that was connected to the Pigtail.

Wiring information is either on the outside of the Power Unit under the Electrical Box or inside the cover of the Electrical Box. Have the Electrician use that wiring information to wire the Power Unit to the power source.

3. Fill the Hydraulic Fluid reservoir with approved Hydraulic Fluid.

The reservoir holds ≈3.5 gallons of Hydraulic Fluid, depending on which Power Unit you have.

When you receive the Power Unit, the reservoir is empty; you need to fill it.

Approved Hydraulic Fluids are any general-purpose ISO-32, ISO-46, or ISO-68 hydraulic oil or approved automatic transmission fluids such as Dexron III, Dexron VI, Mercon V, Mercon LV, Shell Tellus S4 / S3 / S2, or any synthetic multi-vehicle automatic transmission fluid.

#### ▲ WARNING Do not run the Power Unit without Hydraulic Fluid; you will damage it.

#### Important electrical information:

- Improper electrical installation can damage the Power Unit motor; this damage is **not** covered by the warranty.
- Use a separate circuit breaker for each Power Unit.
  - Protect each circuit with a time-delay fuse or circuit breaker appropriate for the Power Unit in use.
    - 220 VAC, single phase circuit.
    - 208-230 VAC three phase circuit.
    - 380 or 440 VAC three phase circuit.
- As you require an Electrician on site to connect the Power Unit to a power source, you might also want to have them install the Power Disconnect Switch and the Thermal Disconnect Switch on the same visit.

▲ DANGER Risk of explosion. This equipment has internal arcing or parts that may spark and should not be exposed to flammable vapors. The Power Unit's Motor should not be located in a recessed area or below floor level. Never expose the motor to rain or other damp environments; damage to the motor caused by water is not covered by the warranty.

#### Installing a Power Disconnect Switch

A Power Disconnect Switch is not provided with this equipment.

A Power Disconnect Switch is a National Electrical Code (NEC) requirement. They are designed to interrupt main electrical power in the event of an electrical circuit fault, emergency situation, or when equipment is undergoing service or maintenance.

Make sure to install a Power Disconnect Switch that is properly rated for the incoming power source.

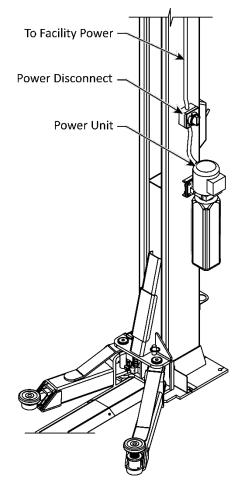
Your Power Disconnect Switch must be readily accessible and installed so that it is in easy reach of the operator or in their line of sight. The Power Disconnect Switch must be clearly marked to indicate its purpose.

The figure to the right shows a Power Disconnect Switch located between the Lift's power source and its Power Unit. A quick flip of the switch immediately cuts power to the Lift.

In the case of your Lift, the location directly above the Power Unit is being used by the Lowering Handle, so your Electrician may want to move the Power Disconnect Switch location up a little.

# ▲ DANGER Installing a Thermal Disconnect Switch *must* be accomplished by a licensed, Electrician.

Have the Electrician select a **UL-listed** Power Disconnect Switch.



# **Installing a Thermal Disconnect Switch**

**WARNING** Your Lift motor has **no** thermal overload protection.

Have the Electrician connect a motor Thermal Disconnect Switch or overload device that will make sure the equipment shuts down in the event of an overload or an overheated motor.

▲ DANGER Installing a Thermal Disconnect Switch *must* be accomplished by a licensed Electrician. Do not perform *any* maintenance or installation on the Lift without first making sure that main electrical power has been disconnected from the Lift and *cannot* be re-energized until all procedures are complete.

High running amperage that exceeds the motor's full load amps (FLA) rating may result in permanent damage to the motor.

BendPak strongly recommends you **not** exceed the rated duty cycle of the Lift motor.

#### Leveling

Before operating your Lift, verify the Lift Posts are perpendicular to the ground and the Lift Arms are level:

• Lift Posts: The Posts *must* be the same distance apart at the top and at the bottom.

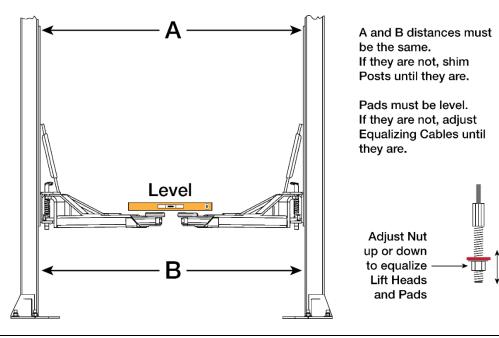
To make sure the Posts are straight, measure the distance between the posts at one foot off the ground (you will need to move the Lift Arms out of the way) and near the top of the posts. The two measurements (**A** and **B** in the drawing below) must be the same.

If the Posts are not straight, shim them as required.

If your Lift Posts are not straight upright or your Lift Arms are not level, this is a safety risk. The Vehicles you put on the Lift will be less secure; they could fall and cause injuries or damage to the Vehicle or to the Lift.

• **Lift Arms**: When the Lift Posts are straight, verify the Lift Arms are level. To make sure they are level, raise them to the first locking position and put a level on the Pads.

Adjust the Equalizing Cables to correct any out of level condition. Determine which Lift Arm is low, then adjust the Nut on the bottom of the Threaded End of the Equalizing Cable until the Lift Arms are level. When you believe the Lift Arms to be level, raise the Lift and listen for the Lift Heads hitting the Safety Locks (there is a distinct thump). Engagement sounds should be simultaneous.



# Installing the Safety Covers - XPR-9TF only

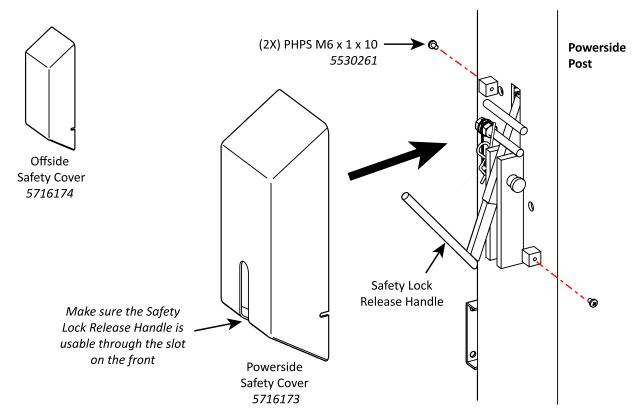
There are two Safety Covers, one for each Safety Assembly, on the outside of each Post.

Refer to **Installing the Safety Assemblies and the Safety Lock Cable** for more information about installing the Safety Assemblies.

The Safety Covers are **not** interchangeable:

- The Offside Safety Cover can be installed in either orientation. It does not have a slot.
- The Power Side Safety Cover can only be installed in one orientation: there is a slot on the front for the Safety Lock Release Handle.

Both Safety Covers connect to their Posts via blocks in the upper left and lower right corners.



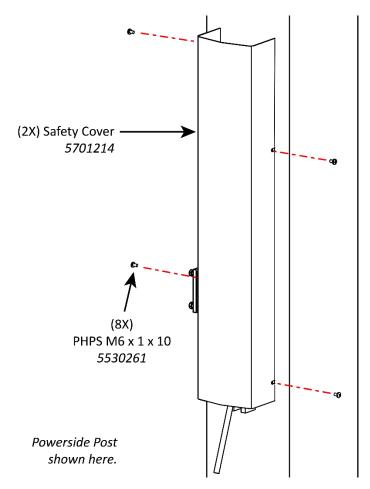
#### To install the XPR-9TF Safety Covers:

- 1. Locate the two Safety Covers and four Cover Screws.
- 2. **On the Offside Post**, install the Cover Screws in each block, making sure to leave enough space between the Block and the Cover Screws to slide in the Safety Cover.
- 3. Slide the Offside Safety Cover for the Offside Post into position, then fully tighten both Cover Screws into their blocks so that the Safety Cover is held securely.
- 4. **On the Power Side Post**, install the Cover Screws in each block, making sure to leave enough space between the Block and the Cover Screws to slide in the Safety Cover.
- 5. Slide the Power Side Safety Cover for the Power Side Post into position, then fully tighten both Cover Screws into their blocks so that the Safety Cover is held securely.
- 6. Fully tighten both Cover Screws into their blocks so that the Safety Cover is held securely.

# Installing the Safety Covers - XPR-9SBT only

The XPR-9SBT Safety Covers are identical and can be installed in either orientation.

Both Safety Covers connect to their Posts via blocks in the upper left and lower right corners.



#### To install the XPR-9SBT Safety Covers:

- 1. Locate the two Safety Covers and eight M6 Cover Screws.
- 2. **On the Offside Post**, install the Cover Screws in each block, making sure to leave enough space between the Block and the Cover Screws to slide in the Safety Cover.
- 3. Slide the Offside Safety Cover for the Offside Safety into position, then fully tighten all Cover Screws into their blocks so that the Safety Cover is held securely.
- 4. **On the Power Side Post**, install the Cover Screws in each block, making sure to leave enough space between the Block and the Cover Screws to slide in the Safety Cover.
- 5. Slide the Power Side Safety Cover for the Power Side Post into position, then fully tighten all Cover Screws into their blocks so that the Safety Cover is held securely.
- 6. Fully tighten all Cover Screws into their blocks so that the Safety Cover is held securely.

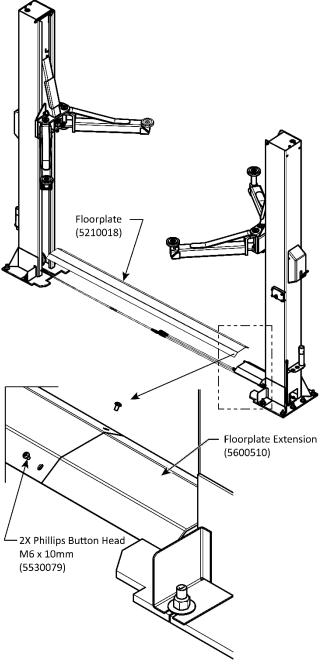
# Install the Floorplate XPR-9SBT Only

The Floorplate protects the Hydraulic Hoses, their connections, and the Equalizing Cables. The **XPR-9SBT** uses three Floorplates (5210018) dropped into the recessed concrete. The Floorplates should be roughly flush with the top of the Concrete Pour and require no fasteners.

# Install the Floorplate XPR-9TF Only

The Floorplate protects the Hydraulic Hoses, their connections, and the Equalizing Cables. The **XPR-9TF** uses one long Floorplate (5210018) for the **narrow configuration**. The Floorplate is mechanically captured between the Lift Post Base Plates and requires no fasteners.

The **XPR-9TF** in the **wide configuration** requires an extension (5600510) and two fasteners (5530079) as detailed in the figure below.



# **Perform an Operational Test**

Before putting your Lift into normal operation, we recommend raising and lowering it several times with a typical Vehicle on the Lift. This will help you get a feel for how to operate the controls and help get any residual air out of the Hydraulic System (sometimes called "bleeding" the system).

# ▲ DANGER Automotive Lifts are dangerous tools when used by inexperienced or impaired technicians. When you even hear the words "automotive lift," your brain should automatically register the fact that lifting a vehicle is a serious endeavor with life-threatening risks if mandatory lifting precautions are ignored.

During the Operational Test, check for proper installation and operation. Do not raise any additional Vehicles until a thorough Operational Test has been done with a typical Vehicle.

# A WARNING Never raise a Vehicle whose weight exceeds the rated capacity of the Lift. Do not leave the controls until the Lift is engaged on its Safety Locks. Only trained personnel should raise or lower the Lift.

#### To perform an Operational Test:

- 1. Follow the instructions in **Raising a Vehicle** and **Lowering a Vehicle** to safely raise and lower a Vehicle on the Lift.
- **WARNING** Be sure to follow the instructions carefully when it comes to contacting the manufacturer's recommended Lifting Points on the underside of the Vehicle. If you do not, the Vehicle could become unstable and fall, which could damage the Vehicle, damage the Lift, and injure or even kill anyone under the Vehicle.
- 2. Adjust the Lift Arms under the Vehicle so the Adapters are **directly under** the Lifting Points for the Vehicle you are raising.
- 3. Raise the Lift until **just before** the Adapters contact the Lifting Points.
- 4. Check the Arm Restraint Gears on all four Lift Arms to make sure they are engaged.

If they are not engaged, move the Lift Arms back and forth until they engage.

- 5. Raise the Lift until the tires of the Vehicle are a few inches off the ground.
- 6. Check to verify all four Adapters are making solid contact with the Lifting Points.

If any of the Adapters are **not** making solid contact with the Lifting Points, carefully lower the Lift and start over again; the Adapters **must** make solid contact with the Lifting Points.

7. Raise the Vehicle approximately three feet (one meter) off the ground, then lower it back down.

Watch and listen as the Lift raises and then lowers. The Lift may move erratically or make some odd noises the first couple of times you use it; this is normal.



Residual air in the Hydraulic System can cause the Lift to shake, move erratically, or squeak; this is normal when you first start using the Lift. It will soon stop doing this, as the Hydraulic System is self-bleeding.

8. Wait for one minute.

**NOTICE** The Power Unit is not a constant duty motor; *it cannot be run continuously*.

9. Repeat the process, this time raising the Lift, engaging it on a Safety Lock position, taking it off the Safety Lock position, and then lowering it back down to the ground.

Again, follow the instructions in **Raising a Vehicle** and **Lowering a Vehicle** to safely raise and lower a Vehicle on the Lift, including engaging it on its Safety Locks.

10. If the Lift is working without shaking, moving erratically, or squeaking, there is no need to repeat the procedure.

If the Lift is shaking, moving erratically, or squeaking, repeat the procedure one more time.

If you continue to have issues, refer to **Troubleshooting** for assistance.

- 11. When the Lift is on the ground and the Vehicle is on all four tires, move the four Lift Arms to their full drive-through positions.
- 12. Drive the Vehicle out.
- 13. With no Vehicle on the Lift Arms, press and hold the Up button on the Power Unit.

The Lift Arms start rising.

## **Review Final Checklist Before Operation**

Make sure these things have been done before putting the Lift into normal operation:

- Review the **Installation Checklist** to make sure all steps have been performed.
- Verify the Power Unit is getting power from the power source.
- Check the Hydraulic Fluid reservoir; it must be full of approved Hydraulic Fluid or automatic transmission fluid. **You can harm the motor by running it without enough fluid.**
- Check the Hydraulic System for leaks. Verify all Hydraulic Hose connections, Hydraulic Fittings, and Auxiliary Port Plugs on the Lift and Power Unit are tight.
- Verify both Posts are plumb, shimmed, and stable.
- Check to see that all Anchor Bolts are correctly torqued.
- Apply white lithium grease to the inside of the Posts where the Slide Blocks move.
- Make sure both Threaded Rods are in place and tightened near the top of both Posts.
- Verify all Cables are properly positioned in their Sheaves.
- Verify all Cable Sheave retaining pins and/or clips are secure.
- Make sure both Safety Assemblies are connected and working normally.
- Make sure that all Safety Locks are clear and free.
- Make sure an Operational Test has been done.
- Leave the Installation and Operation Manual with the owner/operator.



# **Operation**

This section describes how to operate your Lift.

Automotive Lifts are dangerous tools when used by inexperienced or impaired technicians. When you even hear the words "automotive lift," your brain should automatically register the fact that lifting a vehicle is a serious endeavor with life-threatening risks if mandatory lifting precautions are ignored.

# **Lift Operation Safety Rules**

Important: Your safety is dependent on reading, understanding, and implementing these Safety Rules. Do not skip over them; read them carefully and follow them!

Do the following before you raise or lower a Vehicle on your Lift:

- Check the Lift. Check the Lift for any missing, heavily worn, or damaged parts. Do not operate the Lift if you find any issues; instead, take it out of service, contact your dealer, email support@bendpak.com, or call (800) 253-2363 select option 7, then 5.
- Check the area. Keep the area around the Lift clean and free of obstructions; anything that could cause a problem for the Lift. Do not forget to check *above* the Lift. If you find an obstruction, move it out of the way. Do not allow any people or animals within 30' of the Lift while it is in motion.
- **Check the operators**. Make sure that everyone who is going to operate the Lift has been trained in its use, has read the labels on the unit, and has read the manual. Only the operator should be within 30 feet of the Lift when it is in motion. Do not allow children to operate the Lift. Do not allow anyone under the influence of drugs or alcohol to operate the Lift.
- Check for safety. Make sure everyone who is going to be walking near the Lift is aware of its presence and takes appropriate safety measures. Only put Vehicles on the Lift Arms. When raising a Vehicle on the Lift, do not leave it until it is positioned on Safety Locks. When lowering the Lift, do not leave it until it is on the ground.
- **Check the Vehicle**. Never exceed the Lift's weight rating. Do not allow people inside a Vehicle you are going to raise. Make sure the Vehicle is not overbalanced on either end. Make sure you know the manufacturer's recommended Lifting Points for the Vehicle. Never raise just one side, one corner, or one end of a Vehicle.
- Always use care when you are around your Lift. When it is in a lowered position, be careful not to trip over it. When it is raised, be careful not to strike your head on the Lift Arms or the Vehicle. When you are raising or lowering a Vehicle, keep all people, animals, and objects at least 30<sup>-/</sup> away from the Lift.</sup>

## **About Lifting Points, Adapters, and Auxiliary Adapters**

An important concern when using a frame-engaging Lift is that the raised Vehicle must be balanced on the four Lift Arms. If the Vehicle is not balanced, it is more likely to become unstable and slide off the Lift, possibly damaging the Lift, the Vehicle, and anything under the Lift, including injuring people.

**WARNING** You **must** use all four Lift Arms when raising a Vehicle. Never use just one, two, or three Lift Arms to raise a Vehicle. The Vehicle will be unstable and could slip off the Lift, possibly damaging the Lift, damaging the Vehicle, and injuring anyone under it.

To balance a Vehicle on a frame-engaging Lift, you need to have the Adapters (also called Pads) contact the Vehicle on the manufacturer's recommended Lifting Points. When you raise a Vehicle by its Lifting Points, the Vehicle is balanced.

**NOTICE** The manufacturer's recommended Lifting Points do not take into consideration any major changes that might have been made to the Vehicle. If the motor is removed, for instance, or there is a 5,000 lbs. (2,268 kg) weight in the trunk, the Vehicle's Lifting Points will not be the best balancing points.

Some Vehicles have indicators on the underside that identify the Lifting Points; many do not.

Your best approach is to find the Vehicle in the **ALI guide**, *Vehicle Lifting Points for Frame Engaging Lifts* or contact the manufacturer of the Vehicle. This guide also includes a page of safe lifting suggestions, which everyone who uses this Lift should read.

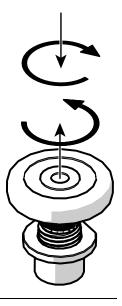
Lifting it Right: A Safety Manual from the Automotive Lift Institute, also available through **ALI**, includes a wide variety of information about Lifts and how to use them safely.

# **DANGER** *Never* place Contact Pads under non-approved, non-load holding Sill Covers or Side Skirts!



#### **Standard Accessories**

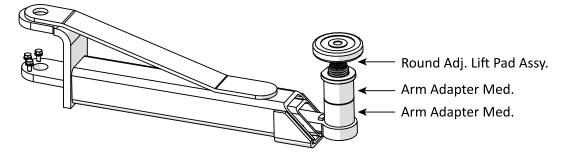
The XPR-9TF is supplied with Four Screw Lift Pad Assemblies (5216239) Best suited for Vehicles with Unibody construction; they are height adjustable, up to 3''.



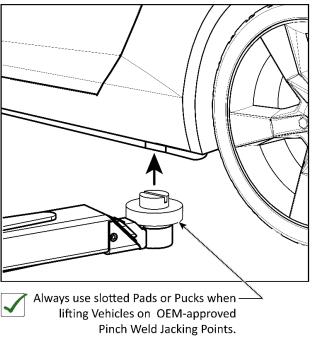
# **Optional Accessories**

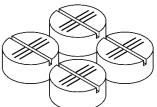
Visit **bendpak.com** for additional Adapters and Auxiliary Adapters (also called height adapters or extenders) available adapters include the following:

- Four Short Auxiliary Adapters 2.25" (56 mm) (5746007). Allows you to position the height of your Auxiliary Adapters to make better contact with Vehicles.
- Four Medium Auxiliary Adapters 2.5" (63 mm) (5746192). Allows you to position the height of your Auxiliary Adapters to make better contact with Vehicles.

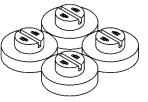


- WARNING You can stack the optional Auxiliary Adapters, but only up to 9" If you stack Auxiliary Adapters above 9" the Vehicle could become unstable and slip off the Lift, possibly damaging the Lift, damaging the Vehicle, and injuring anyone under it.
- **WARNING** Use the correct Adapters. Do not attempt to lift trucks or other frame type vehicles with standard Rubber Contact Pads.
- **WARNING** Never use the Lift with missing or damaged rubber Contact Pads. Always replace Rubber Contact Pads when worn or damaged.
- Quick-Fit Slotted Pinch-Weld Pucks or Pads Always use slotted Pinch-Weld Pucks (5210263) or slotted Pinch-Weld Pads (5210254) when lifting Vehicles on Manufacturer Approved Pinch-Weld Jacking Points. These convenient tear-resistant urethane Adapters simply fit over the existing round Contact Pads.



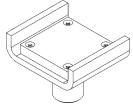


5210254 Set of 4 Slotted Pads



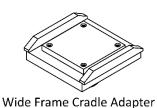
5210263 Set of 4 Slotted Pucks

• **Frame Cradle Adapters** — Required for use when lifting trucks, vans or other frame Vehicles that require additional stability. (5215761) Set of 4.



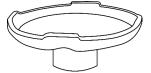
 Wide Frame and Super Wide Frame Cradle Adapters — Recommended for use when lifting heavy-duty wide frame vehicles. Wide Frame version fits frames up to 5.25" (133 mm) (5215828).

**Super Wide Frame** version fits frames up to 6.5" (168 mm) (5210253) set of 2.



Super Wide Frame Cradle Adapter

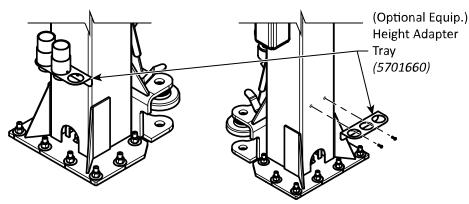
• **Steel Lift Pads** — Recommended for additional stability on all vehicles. The flanged edges grip the chassis for an extra-secure hold. (5215763) Set of 4.



• **Replacement Polyurethane Tuf Pads™** - Never use your Lift with missing or damaged Rubber Contact Pads. Always replace Pads when worn or damaged, (5700227) set of 4.



• Adapter Tray — Adapter Trays allow storage of Auxiliary Adapters conveniently near the Lift Arms. Attach with fasteners, 4 each of M6 x 20mm, M6 Flat Washers and M6 Nyloc Hex Nuts.



 SUV and Van Adapters — Recommended for Trucks, SUVs, and Vans the require additional lifting height.



Visit **BendPak.com** for accessories and replacement Parts information at **(800) 253-2363** select option 7, then 5. Please have the model and serial number of your Lift available.

#### **Raising a Vehicle**

This section describes how to raise a Vehicle on your Lift.

▲ WARNING Never raise a Vehicle whose weight exceeds the rated capacity of the Lift. Do not leave the controls until the Lift is engaged on a Safety Lock position or fully lowered. Only trained personnel should raise and lower the Lift.

#### To raise a Vehicle on the Lift:

- 1. Make sure all four Lift Arms are on the ground in their full drive-through positions.
- 2. Check under the Vehicle you are going to raise, check for the type of vehicle frame, and then put the most appropriate Adapters on the Lift Arms.

If you are lifting a sedan or a Vehicle with a unibody construction, a Screw Lift Pad is generally the best choice. If you are lifting an SUV, truck, or other Vehicle with a frame construction, a Frame Cradle Pad is generally the best choice.

- ▲ WARNING Always use the Adapter type best suited for the Vehicle you are raising. If you use the wrong Adapter type, the Vehicle could become unstable.
- 3. Drive the Vehicle in.
- ▲ CAUTION When driving a Vehicle into position, keep to the middle of the area between the Posts. If you hit a Lift Arm or any other portion of the Lift, you could damage the Vehicle and/or the Lift.
- 4. When you are satisfied with the location of the Vehicle, put it in park, put on the parking brake, and turn off the motor.

If the Vehicle is a manual transmission, put it into first gear before turning off the motor.

- 5. Get out of the Vehicle; open the doors carefully to avoid banging them on the Lift.
- 6. Locate the manufacturer's recommended Lifting Points for the Vehicle you are raising.

If you are unsure where the Lifting Points are, consult Vehicle Lifting Points for Frame Engaging Lifts, which is available through ALI at **www.autolift.org/ali-store/**, or the manufacturer of the Vehicle.

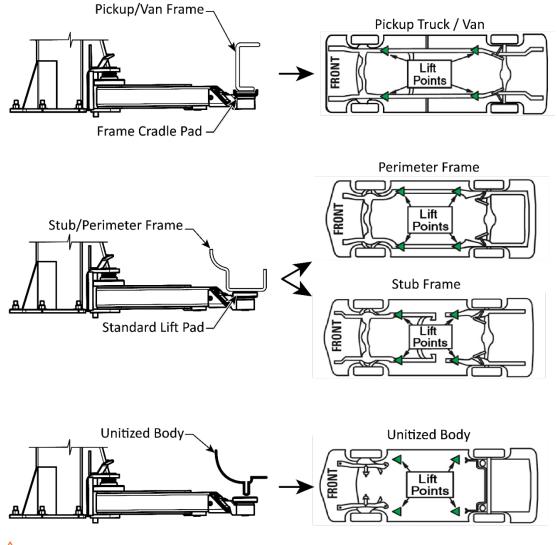
Some vehicles may have the manufacturers' recommended Service Garage Lift Point locations identified by a triangle mark on the underside of the vehicle, reference SAE J2184-(Current Edition). On some vehicles, specific Lifting Points are indicated by a label located on the driver's side door jamb.

▲ DANGER Do not 'eyeball' the best location for the Adapters. You must use the manufacturer's recommended Lifting Points. If you do not, the Vehicle could become unstable and fall, which could damage the Vehicle, damage the Lift, or injure or even kill anyone under the Vehicle.

▲ WARNING Many specialty or modified Vehicles or Vehicles with unusually short or long wheelbases cannot be on raised on a Two-Post Frame Engaging Lift. Contact the Vehicle's manufacturer for Lifting or Jacking guidance.

The following figure illustrates typical lifting points based on Vehicle Frame type.

#### **Typical Lifting Points**



**WARNING Before** attempting to lift a Vehicle verify:

- The Vehicle Frame is strong enough to support its weight and has not been weakened or compromised by modification, damage, or corrosion.
- The Vehicle individual axle weight does not exceed one-half the Lift capacity.
- The Lift Adapters are in secure contact with the Frame at the Vehicle manufacturers' recommended Lift Points.
- The Vehicle is stable on the Lift and the center of gravity is not shifted making the Vehicle off balance.
- 7. Adjust the Lift Arms under the Vehicle so the Adapters are **directly under** the Lifting Points for the Vehicle you are raising.

If necessary, use optional Auxiliary Adapters for extra height.

- 8. Raise the Lift until **just before** the Adapters contact the Lifting Points.
- 9. Check the Arm Restraint Gears on all four Lift Arms to make sure they are engaged.

If they are not engaged, move the Lift Arms back and forth until they engage.

- 10. Raise the Lift until the tires of the Vehicle are a few inches off the ground.
- 11. Check to make sure all four Adapters are making solid contact with the Lifting Points.

If any of the Adapters are **not** making solid contact with the Lifting Points, carefully lower the Lift and start over again; the Adapters **must** make solid contact with the Lifting Points.

12. Rock the Vehicle to verify the Vehicle is stable and balanced.

If the Vehicle is **not** stable and balanced, lower the Lift back to the ground and start over.

If the Vehicle is stable and balanced, you can raise it to the desired height.

**DANGER** Do not raise the Lift further until you are certain the Vehicle on the Lift is both stable and balanced. If the Vehicle is **not** stable and balanced, it could fall, which could damage the Vehicle, damage the Lift, or injure or kill anyone under the Vehicle.

13. Press and hold the **Up** Button.

Listen as the Lift passes the Safety Locks; you should hear each side pass by the Safety Locks at approximately the same time.

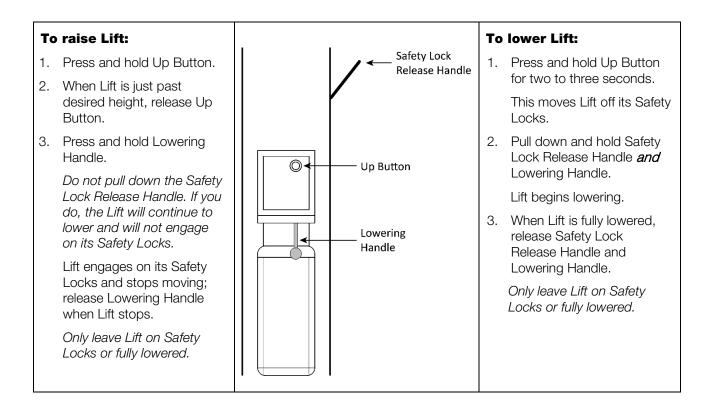
- 14. When the Vehicle reaches the desired height, go past the next Safety Lock position (you will hear the clank as it passes), then release the **Up** Button.
- 15. Press and hold the Lowering Handle, which lowers the Lift onto the Safety Lock you just passed.

Do not hold the Safety Lock Release Handle; that is for lowering the Lift to the ground.

16. When the Lift stops moving down, it is engaged on its Safety Locks; release the Lowering Handle.

# Do not leave the Lift controls unless the Lift is engaged on its Safety Locks or fully lowered.

- 17. Recheck the Adapters to verify they are all still making solid contact with the Lifting Points.
- 18. Make sure the Lift is engaged on the same Safety Lock on both Posts. You do not want the Lift engaged on Safety Locks of two different heights or one Safety Lock engaged but the other not.
- 19. Begin work on the Vehicle.
- **DANGER** Only leave the Lift fully lowered or engaged on a Safety Lock. Never move or work under a vehicle unless it is stable and resting on a Safety Lock.



# Lowering a Vehicle

To lower a Vehicle off the Lift, first raise it a small amount to get it off its Safety Locks, then lower it.

#### To lower a Vehicle off the Lift:

1. Check under and around the Vehicle to verify the area is clear of all obstructions.

If you find any obstructions, move them out of the way.

2. Press and hold the **Up** Button for a second or two to move the Lift off its Safety Locks.

Raise the Lift at least two inches to get clear of the Safety Locks.

- 3. Pull down and hold the Safety Lock Release Handle (on the Power Side Post above and to the right of the Power Unit).
- 4. Push and hold the Lowering Handle (on the front of the Power Unit). The Lift begins lowering.

**Important**: Both the Safety Lock Release Handle **and** the Lowering Handle must be held down at the same time to lower the Lift.

A warning Do not override the Lift controls; for safety purposes, they are designed to stop the Lift if released. Overriding the Lift controls could lead to damage to the Lift, damage to the Vehicle on the Lift, or injury (even death) to persons near the Lift.

Remain clear of the Lift as it comes down; obey the pinch point warning decals.

- 5. When the Lift is on the ground, release both Handles, then move all four Lift Arms to their full drivethrough positions.
- 6. Drive the Vehicle out.

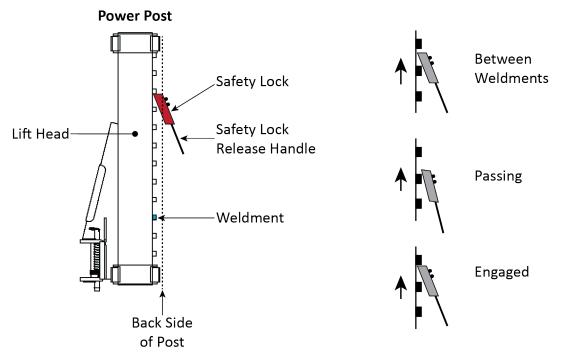
# **About Safety Locks**

Your Lift has multiple Safety Lock positions, allowing you to lock the Lift at the best height for what you need to do.

A Safety Lock **position** is defined as when the Lift is engaged on both of the Lift's Safety Locks at the same height on both Posts.

Important: Always make sure both Safety Locks are engaged at the same height on both Posts. You do not want the Lift engaged on Safety Locks of two different heights or the Safety Lock on one Post engaged but the Safety Lock on the other Post not engaged.

Safety Lock positions are created by the Safety Lock Weldments, which are on the back of each Lift Head. Safety Lock Weldments hit the Safety Locks and then move past them as the Lift Heads rise.



Drawing not to scale. Components removed for clarity. Posts not shown for clarity. Offside Safety Lock not shown.

As they move past the Safety Locks, the Weldments push the Safety Lock and the Safety Lock Release Handle down (the Safety Lock Release Handle is found on the Power Side Post only). When the Weldment is completely past the Safety Locks, the Safety Locks clank back into position between Weldments. This happens each time Safety Locks are passed, so you will generally be hearing multiple clanks as the Lift rises and lowers.

To engage the Lift on a Safety Lock position, wait until the Vehicle reaches the desired height for the work you are going to do, then listen for the clank as the Weldments pass the next Safety Lock position. When you hear the Safety Lock clank, release the Up Button, and then hold down the Lowering Handle (on the front of the Power Unit) for a second or two to back the Weldments down onto the just-passed Safety Locks; **do not** hold down the Safety Lock Release Handle.

# A warning Only leave the Lift either fully lowered or engaged on Safety Locks. If you leave the Lift raised but not engaged on Safety Locks, the Vehicle is not secure. It could fall, possibly damaging the Vehicle, the Lift, and injuring anyone under the Vehicle.

# Maintenance

▲ DANGER Before performing any maintenance on your Lift, make sure it is completely disconnected from power. The Lift uses electrical energy; if your organization has Lockout/Tagout policies, make sure to implement them before performing any maintenance. If you come into contact with high voltage/current, you could be injured or killed.
 ▲ DANGER Do not use the Lift if the cables are damaged or extremely worn. If a Vehicle is raised when you notice the damage or extreme wear, very carefully lower the Vehicle to the ground. When the Lift is on the ground, remove it from service, disconnect it from power, and make arrangements to have it repaired.
 ▲ WARNING Do not operate your Lift if you find maintenance issues; instead, remove it from service and correct the maintenance issues. Technical support and service is available from

your dealer, on the Web at **bendpak.com/support**, by email at **support@bendpak.com**, or by phone at **(800) 253-2363**, select option 7, then 4. Online chat is also available at **www.bendpak.com** click the chat icon.

Read the Installation and Operation manual and understand how this equipment operates before using, maintaining, or repairing. Routine maintenance and adjustments are the responsibility of the owner/user and are not covered under warranty.

Routine maintenance and adjustments should be carried out on a regular basis as outlined below. *Unless stated otherwise, all maintenance may be performed by the owner/employer and does not require trained lift service personnel.* Replace worn, damaged or broken parts with original BendPak or BendPak approved parts or with parts that meet or exceed the original specifications.

#### Maintenance and Lubrication Interval Recommendations:

This lift's service life is dependent on the level and frequency of care and maintenance you provide. By simply following a few guidelines, you can increase the life of your lift by many years. The following care and maintenance procedures not only help to foster that, but also aid by ensuring safe operation and early detection of problems.

#### **Tools required:**

- Open End Wrench Set
- Hydraulic Fluid (same type as currently listed; Monthly Maintenance)
- Shop Towels
- Screwdrivers
- Hex Key Set

#### Lubricants:

- White Lithium Multi-Purpose Lubricant
- Red Lithium Grease
- ALMASOL Wire Rope Lubricant or 90W Gear Oil

The following maintenance and interval recommendations are based on typical workday use and operation.

#### **Daily Maintenance**

- 1. Keep the Lift and work area clean, to promote safety and better problem visibility.
- 2. Visually inspect that the Safety Locks are in good operating condition. Do not use your Lift if the Safety Locks are damaged or excessively worn.

#### Always wear proper Personal Protective Equipment when working with hydraulics. Gloves and Safety Glasses are a minimum requirement. Keep your body away from suspected leaks. Use a clean piece of sheet metal (or new paper towel) to rub along hoses and fittings to detect leaks. Shut down the equipment if a leak is suspected.

3. Watch for hydraulic fluid leaks on hoses and hose fittings. Inspect for damage. Hose covers that are cut, cracked, blistered, show signs of abrasion, kinking or flattened are to be replaced.

4. Verify the cylinder clamp is in place and tight on the hydraulic cylinder above the Lift head.

#### Monthly Maintenance and Maintenance

1. Remove, clean, and apply new Red Lithium grease to all Cable Sheave Pins as outlined in the **Lubrication Procedure**.

2. Inspect the condition of all Equalizing Cables and mechanisms. Run a shop towel over the Cable surface while watching for snags. Replace as required.

 Inspect all hydraulic hoses and fittings for damage and leaks. Approved Hydraulic Fluids are any general-purpose ISO-32, ISO-46, or ISO-68 hydraulic oil or approved automatic transmission fluids such as Dexron III, Dexron VI, Mercon V, Mercon LV, Shell Tellus S4 / S3 / S2, or any synthetic multi-vehicle automatic transmission fluid.

4. Apply 90-WT gear oil or ALMASOL® Wire Rope Lubricant to both Equalizing Cables.

5. Apply White Spray Lithium MP grease to the four inside contact corners of both Posts.

6. Apply White Spray Lithium MP grease to all Lift Arm Pivot Points.

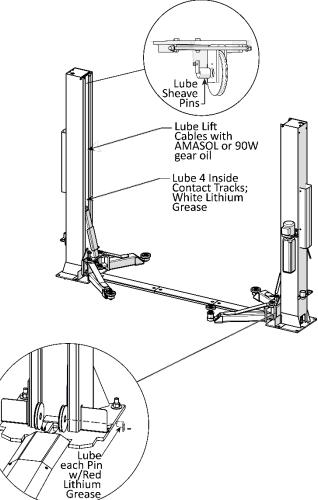
- 7. Apply Red Lithium grease to all Sheave Pins.
- 8. Inspect all Lift Arm Pins and locking mechanisms for damage and wear. Replace as required.
- 9. Verify all fasteners are torqued to specifications.
- 10. Verify all Warning labels are in good condition and legible.

#### **Every Two Months**

Verify all anchor bolts are secure and torque to 85-95 ft.-lbs.

#### Every three to five years or sooner; as required

- 1. Carefully check the Equalizing Cables for signs of damage or extreme wear. See **Wire Rope Inspection and Maintenance** for additional information.
- 2. If the Lift becomes inoperative in a raised position, see the **Troubleshooting** section.



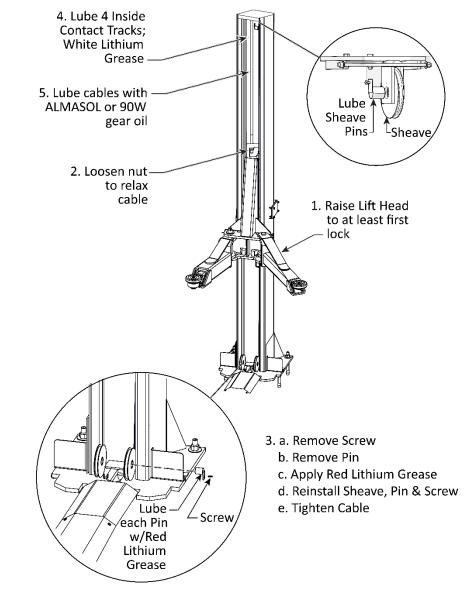
### **Lubrication Procedure**

#### **To Lubricate**

- Raise the Lift Head (if required) to rest on at least the first Safety Lock.
- 2. Remove the Polyethylene Cover from the Lift Head then loosen the Cable Nut to relax the cable.
- 3. Lubricate the Sheaves.
  - a. Remove the screw securing the pin at the sheave.
  - b. Remove the Pin from the Sheave.
  - c. Apply Red Lithium Grease to the Pin.
  - d. Reinstall the Sheave Pin through the Sheave then insert and tighten screw.

e. Tighten the Cable Nut. See Leveling Section to readjust Lift Arms.

- 4. Lube 4 inside lift head vertical contact tracks (inside posts) with white lithium grease.
- 5. Lube cables with ALMASOL or 90W gear oil.



## **XPR-9 Series Wire Rope Inspection and Maintenance**

The XPR-9 Series wire ropes should be inspected regularly:

- Lifting cables should be replaced when there are visible signs of damage or extreme wear. **Do not** use the Lift if it has damaged or worn cables.
- Lifting cables should always be maintained in a well-lubricated condition.

Wire rope is fully protected when each wire strand is lubricated both internally and externally. Excessive wear shortens the life of wire rope. Use a wire-rope lubricant that penetrates to the core of the rope and provides long-term lubrication between each individual strand, such as 90-WT gear oil or ALMASOL® Wire Rope Lubricant.

To make sure that the inner layers of the rope remain well lubricated, lubrication should be carried out at intervals not exceeding three months during operation.

• All sheaves and guide rollers in contact with the moving rope should be given regular visual checks for surface wear and lubricated to make sure they run freely. This operation should be carried out at appropriate intervals generally not exceeding three months during operation.

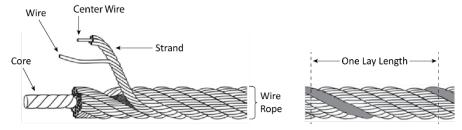
For all sheave axles, use Red Lithium grease. For all sheaves guide rollers (sheave cable-groove), use 90-WT gear oil or a similar heavy lubricant, applied by any method including pump/spray dispensing, brush, hand, or swabbing.

How often should the Cables be inspected?

Lifting cables should be visually inspected at least once each day when in use, as suggested by American Petroleum Institute's Recommended Practice 54 guidelines. Any lifting cables that have met the criteria for removal must be immediately replaced.

• When should you replace lifting cables due to broken wires?

Lifting cables should be removed from service when you see six randomly distributed broken wires within any one lay length, or three broken wires in one strand within one lay length.



• Are there other reasons to replace your lifting cables?

Yes. Corrosion that pits the wires and/or connectors, evidence of kinking, crushing, cutting, birdcaging, or a popped core, wear that exceeds 10% of a wire's original diameter, or heat damage.

- How do you find broken wires?
  - a. Relax your rope to a stationary position and move the pick-up points off the sheaves. Clean the surface of the rope with a cloth a wire brush, if necessary so you can see any breaks.
  - b. Flex the rope to expose any broken wires hidden in the valleys between the strands.
  - c. Visually check for any broken wires. One way to check for crown breaks is to run a cloth along the rope to check for possible snags.
  - d. With an awl, probe between wires and strands and lift any wires that appear loose. Evidence of internal broken wires may require a more extensive rope examination.

					FAS	TENER T	FASTENER TORQUE CHART	HART					
	Bolt Grade (SAE)	$\bigcirc$	SAE Gra	SAE Grade 0-1-2	$\bigcirc$	SAE G	SAE Grade 5		SAE G	SAE Grade 8	$\bigcirc$	Socket H Scr SAE (	Socket Head Cap Screw SAE Grade
	Bolt Class (Metric)	9.4	Metric (	Metric Class 4.6	8.8	Metric	Metric Class 8.8	10.9	Metric C	Metric Class 10.9	12.9	Metric C	Metric Class 12.9
;; ;;	; ; ;	Tig	Tightening Torque	ər	Tig	Lightening Torque	ne	Tig	Tightening Torque	ər	Ţ	Tightening Torque	ne
Bolt Size (SAE)	Bolt Size (Metric)	Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain & Dry (ft-lbs)	Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain & Dry (ft-lbs)	Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain & Dry (ft-lbs)	Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain & Dry (ft-lbs)
1/4-20	M6 x1.0	2.3	2.6	3.0	5.8	6.6	7.7	8.3	9.4	11.1	9.7	11.0	13.0
5/16-18	M8 x 1.25	3.8	4.3	5.0	9.7	11.0	13.0	13.9	15.8	18.5	16.3	18.4	21.7
3/8-16	M10 x 1.50	10.8	12.3	14.4	27.9	31.6	37.2	39.9	45.2	53.2	46.7	52.9	62.2
7/16-14	N/A	24.0	27	30.0	35.0	42	50.0	55.0	65	70.0	61.0	68	76.0
1/2-13	M12 x 1.75	18.9	21.4	25.2	48.7	55.1	64.9	9.69	78.9	92.8	81.4	92.2	108.5
9/16-12	M14 x 2.00	30.2	34.2	40.2	77.8	88.1	103.7	111.3	126.1	148.4	130.0	147.4	173.4
5/8-11	M16 x 2.00	47	53	62	121	137	161	173	196	230	202	229	269
3/4-10	M18 x 2.50	65	73	86	167	189	222	239	270	318	279	316	372
7/8-9	M22 x 2.50	136	155	182	320	365	430	460	515	600	510	575	640
WARNING illustrated If the faste though the fastener's : occur. The of proof loi	I Prior to Inst on this chart. thers are not I s given torque s given torque torque value: ad for specifie	WARNING! Prior to Installation, inspect all accompanying man illustrated on this chart. Proper torquing practices cannot be o If the fasteners are not properly plated, the fastener threads a though the given torque value is reached. For this reason, it is fastener's serviceability or to correctly lubricate the fastener p occur. The torque values can only be achieved if the nut (or ta of proof load for specified bolts. Torque values are listed in foc	t all accompa g practices co , the fastener d. For this re lubricate the chiues are li	nying manuals annot be over ( threads are m ason, it is critic fastener prior nut (or tepped sted in foot-po	, parts lists and emphasized. To ot clean and fre cal that all faste cal that all faste tho assembly and thole) has a pro- unds. Torque w	catalogs to e reque values a e of deforma ners be inspu torquing wi of load grea rrenches sho	insure you hav are provided a: ation, or are no ected for propri ected for propri ter than or equ uld be calibrat	WARNING! Prior to Installation, inspect all accompanying manuals, parts lists and catalogs to ensure you have all the necessary parts. Identify all fasteners and their proper torque settings as illustrated on this chart. Proper torquing practices cannot be over emphasized. Torque values are provided as a convenient method of achieving correct pre-loading of highly stressed fasteners. If the fasteners are not properly plated, the fastener threads are not clean and free of deformation, or are not properly lubricated, the correct fastener pre-load will not be achieved even through the given torque value is reached. For this reason, it is critical that all fasteners be inspected for proper plating, thread form and correctly lubricated prior to torquing. Failure to verify a fastener's serviceability or to correctly lubricate the fastener prior to assembly and torquing will result in the fastener not being properly pre-load and subsequent failure of the fastener may occur. The torque values con only be achieved here here are provided as a proof load greater than or equal to the bolt's minimum ultimate tensile strength. Clamp loads estimated as 75% of proof load for specified bolts. Torque values are listed in foot-pounds. Torque wrenches should be calibrated on an annual basis. Never use an impact driver on a torque multiplier.	ary parts. Ide method of ach cated, the co id form and c ing properly I minimum ult I basis. Never	ntify all fastent nieving correct rrect fastener j orrectly lubrica pre-loaded and pre-tensile s use an impact	ers and their pr pre-loading of pre-load will no tied prior to to the prior to to subsequent fe trength. Clamp trength. Clamp	oper torque : highly stresse to be achievec rquing. Failur rquing of the fi i loads estima que multiplie	settings as sd fasteners. J even e to verify a astener may ted as 75% :r.

# **Torque Chart**

# Troubleshooting

This section describes how to troubleshoot your Lift.

- **CAUTION** If your Lift is not functioning correctly, you must take it out of service until it is fixed. **Qualified personnel must perform all repair work**.
- **WARNING** The Lift uses electrical energy; if your organization has Lockout/Tagout policies, make sure to implement them before performing any Troubleshooting.

Issue	Action to Take
Once raised, Lift does not lower.	Verify there is sufficient Hydraulic Fluid in the reservoir. Make sure there is no air in the Hydraulic System. Make sure none of the Hydraulic Hoses are pinched or leaking. Make sure the Power Unit is getting electrical power. If the Hydraulic Fluid is dirty, replace it with clean fluid. Make sure the Lift is not overloaded. Make sure the load on the Lift is balanced. Contact BendPak Support at <b>bendpak.com/support</b> , via email at <b>support@bendpak.com</b> , or by phone at <b>(800) 253-2363</b> select option 7, then 4.
Lift Head and Arms move erratically or squeak when in use.	Move the Lift Head up and down a few times to flush any residual air from the Hydraulic System.
Lift does not stay up.	Make sure to leave the Lift engaged on its Safety Locks. Check for Hydraulic Fluid leaks.
Vehicle on Lift not level.	Make sure Lift is engaged on Safety Locks at the same height. Make sure the Safety Locks in both Posts are engaged. If either condition is not met, carefully lower the Vehicle back down to the ground and raise it again.
Motor not running.	Check connection to power source; make sure it is plugged in and the appropriate voltage. Check wiring diagram on Power Unit.
Hydraulic Fluid is dirty.	Replace the dirty Hydraulic Fluid with clean, approved ATF fluids, such as Dexron III, Dexron VI, Mercon V, Mercon LV, or comparable.
Lift makes odd noises.	Lubricate hinge points using white lithium grease.

If you continue to have issues with your Lift, take the Lift out of service, then contact your dealer or BendPak Support at **bendpak.com/support**, via email at **support@bendpak.com**, or by phone at **(800) 253-2363** select option 7, then 4.

# **Disposing of Used Hydraulic Fluid**

Used Hydraulic Fluid *must not* be disposed of by dropping it into the trash or dumping it into the street. It has toxic ingredients that are harmful to the environment.

Instead, you are required to either recycle it or drop it off at a hazardous waste collection facility.

If you are unable to find an appropriate facility, the website **earth911.com** has resources that may be of help.

### **XPR-9 Series Lift Disposal - End of Service Life**

Once your Lift has reached the end of its service life it must be disposed of properly. Metal recyclers will be able to advise on methods and costs to remove the Lift and will *reuse* the materials, diverting them from landfills. The best option is to contact a metal recycling center and discuss the size and weight of the Lift to determine if the facility can deconstruct and recover the usable components and metals.

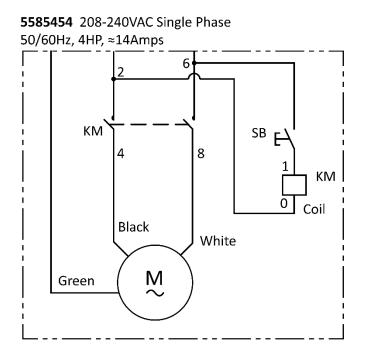
The Hydraulic Cylinders, Hoses, Fittings, and the Power Unit itself must be disposed of in accordance with current national, state, and local regulations governing the use and disposal of hazardous materials. These components and any used Hydraulic Fluid *must not* be disposed of by dropping it into the trash or dumping it into the street. The Hydraulic Fluid contains toxic ingredients that are harmful to the environment.

These components and the Hydraulic Fluid are required to be recycled or must be delivered to a hazardous waste collection facility.

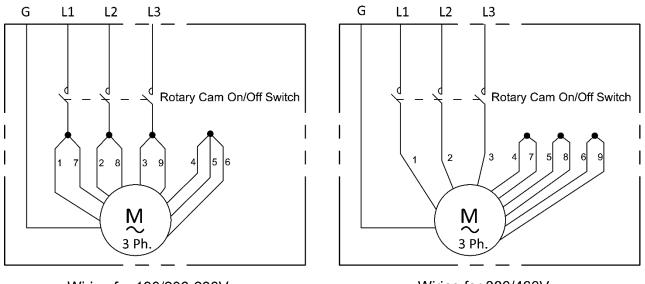
If you have large amounts of Hydraulic Fluid, consider contacting a commercial waste disposal company. In all cases, the best approach is to find an appropriate facility and contact them — in advance — to ask them: what kinds of fluids and materials they accept, what kind of containers it must be in, what hours they are open, their location, and any other information specific to their facility.

If you are unable to find an appropriate facility, the website **earth911.com** has resources that may be of help.

# **Wiring Diagrams**



5585229 190/208-240/380/460VAC, 3 Ph., 50/60 Hz. 3 HP



Wiring for 190/208-230V

Wiring for 380/460V

# Labels

Α

P/N 5905311



В

P/N 5905555

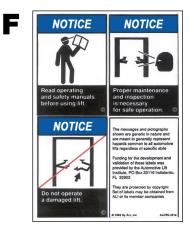
INSTALLATION: Se essories, or configuration-modifying cr of the lift, affect the lift electrical listing, lift and, if they are not certified for use and void. Contact the participant for inf configuration-modifying components. of this lift shall be ak lifts are supplied with concrete fasten Ber E48 cified by any other age nal Building Code (IBC). The manufacture, use, sale, or import of this product may be natents. or pending applications, owned by BendPak Inc. Do Not Remove Engineered by BendPak Inc., USA PN 5905940 Made in China PN 5905940 D **A DANGER** THE MAXIMUM LIFTING CAPACITY FOR THIS LIFT IS DESCRIBED BELOW Maximum Lifting Capacity 9,000 lbs. / 4,082 kg Max. Lifting Cap. / Front of Lift C 4,500 lbs. / 2,041 kg 4,500 lbs. / 2,041 kg city of this lift Alla LA CAPACITÉ DE LEVAGE MAXIMUM Pour ce levage est décrit ci-dessous 9,000 lbs. / 4,082 kg .500 lbs. / 2.041 kg 4,500 lbs. / 2,041 kg P/N 5905403 - XPR-10TS Ε AATTENTIONA MAXIMUM LIFTING CAPACITY CAPACITÉ DE LEVAGE MAXIMUM

9000 Lbs. 4082 Kg.

P/N 5905655 - XPR-10TS

**G BP**BendPak.

XPR-9 Series Two-Post Lifts



Label Kit P/N 5905109



н





### **PLEASE READ**

Internal packing oil may cause the cylinders to bleed oil during start up. This is normal. To extend cylinder and seal life, raise the lift to full height at least once every day.

#### P/N 5905177



PN 5905950

J

#### **TO RAISE LIFT:** 1. Press and hold UP button.

- 2. When lift is just PAST desired
- height, release UP button.
- 3. Hold down Lowering Handle. DO NOT hold down Safety Lock
- Release Handle. Lift engages on safety locks.
- 4. Release Lowering Handle.

#### **TO LOWER LIFT:**

- 1. Press and hold **UP** button for two to three seconds, moving lift off safety locks.
- 2. Hold down Safety Lock Release Handle and Lowering Handle.
- 3. When lift is fully lowered, release both handles.

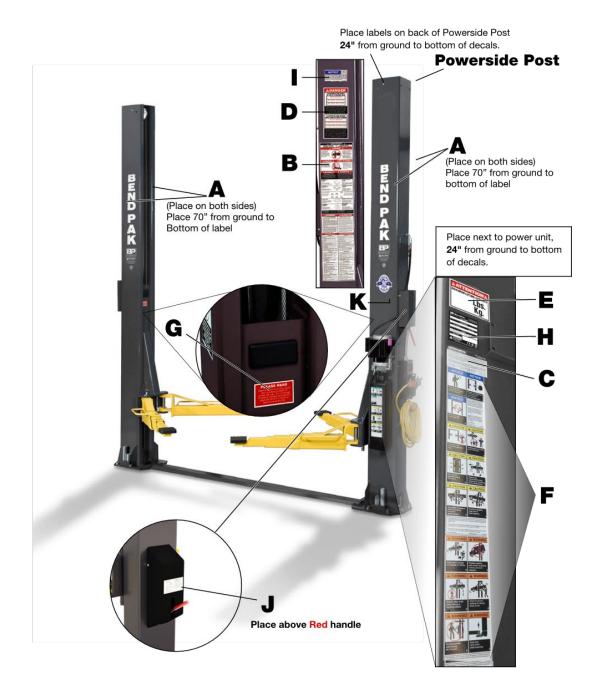
PN 5905414



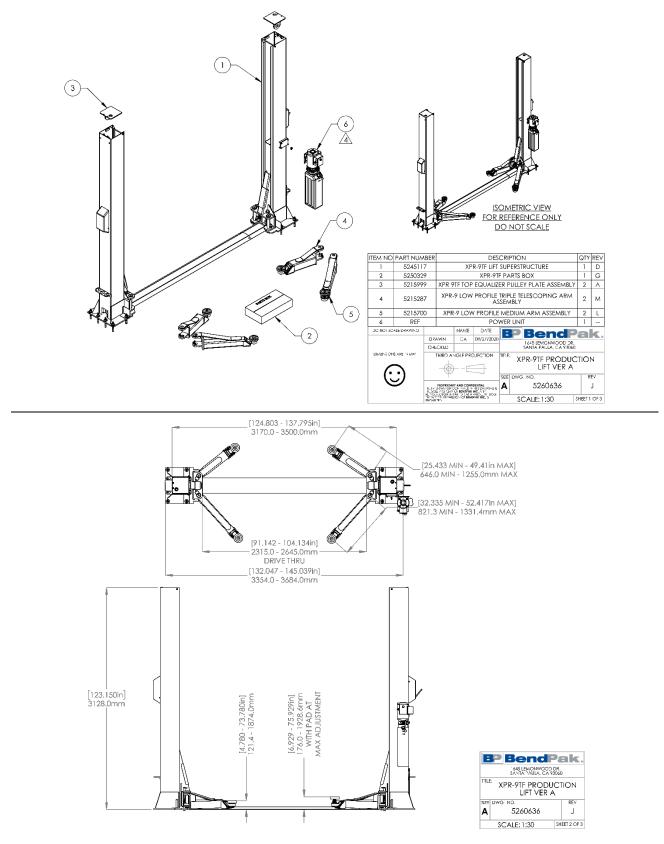
If attachments, NOTICE accessories, or configuration modifying c o m p o n e n ts used on this lift are located in the load path and affect operation of the lift, affect the lift electrical listing, or affect intended vehicle accommodation; and if they are not certified for use on this lift, then the certification of this lift shall become null and void. Contact the participant for information pertaining to certified attachments, accessories, or configuration modifying components. ALI / WLSIA01 www.autolift.org ©2011 by ALI, Inc.

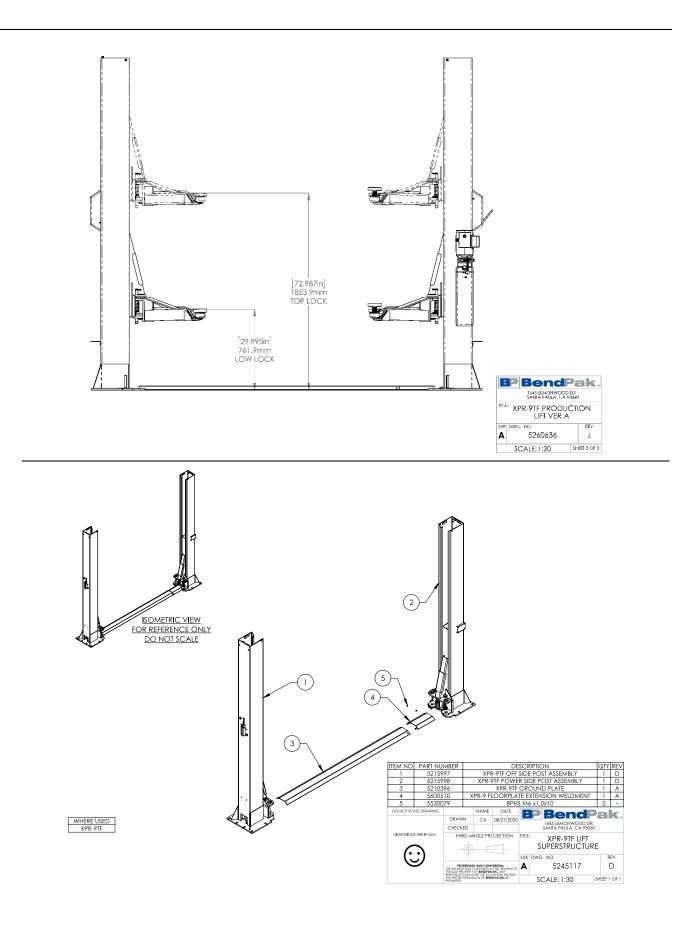
P/N 5905377

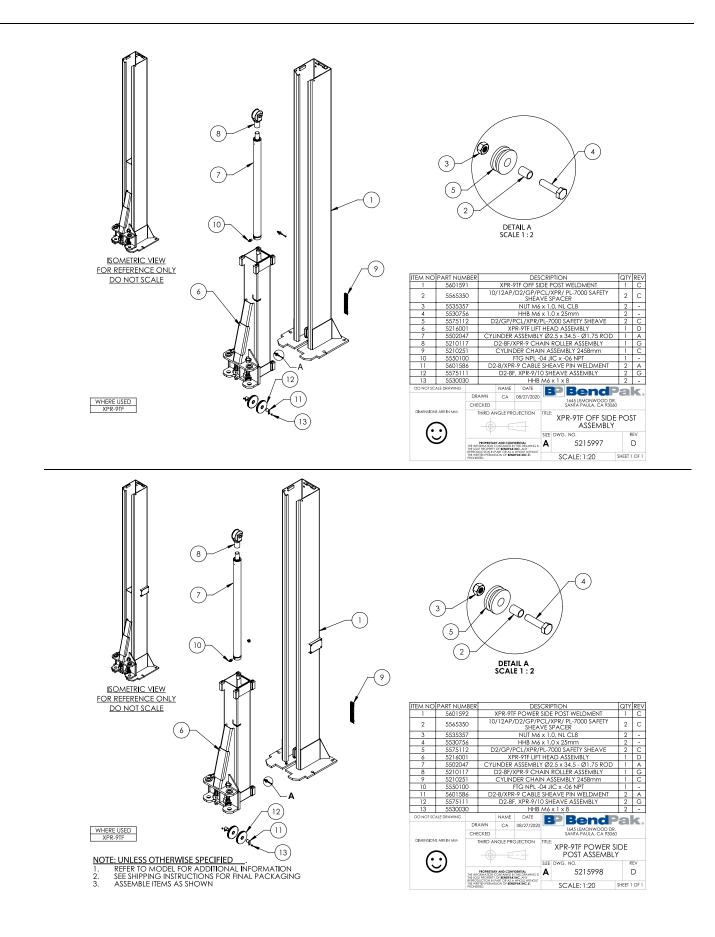


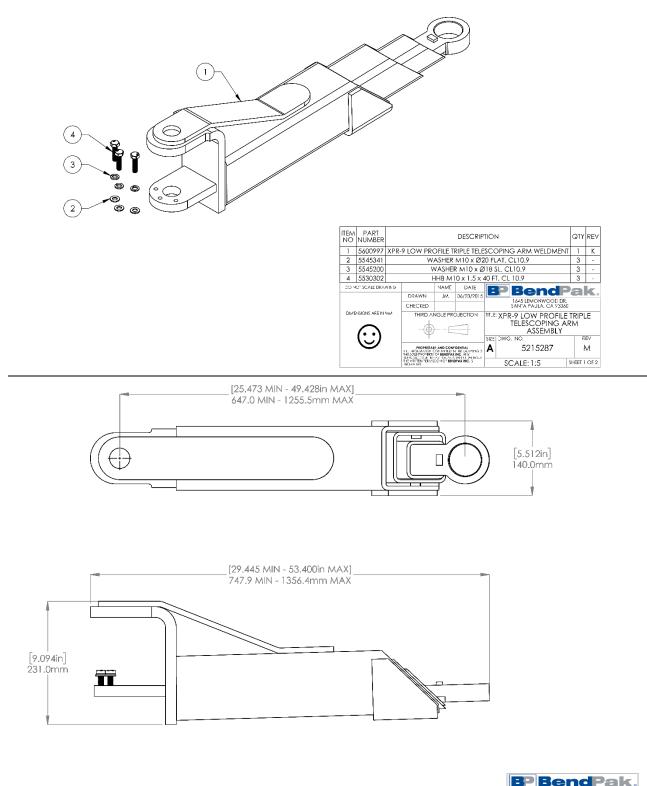


## **Parts Drawings**

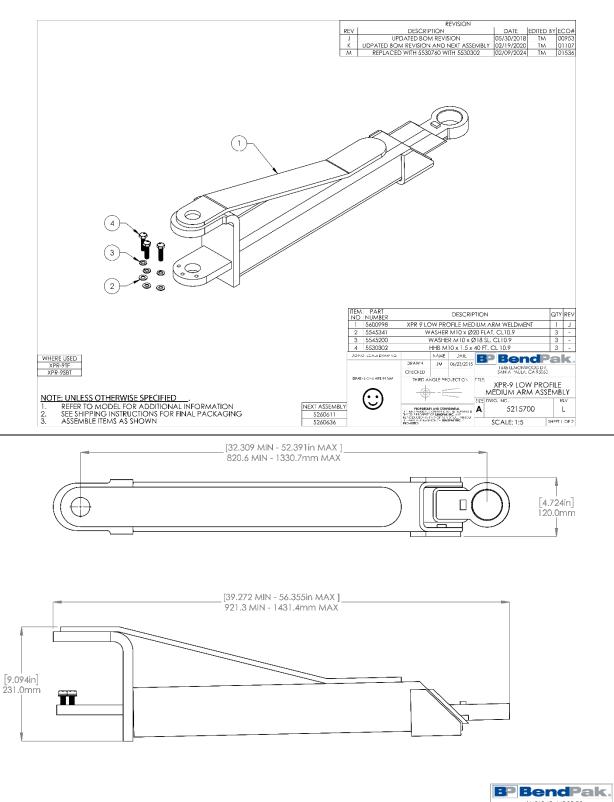




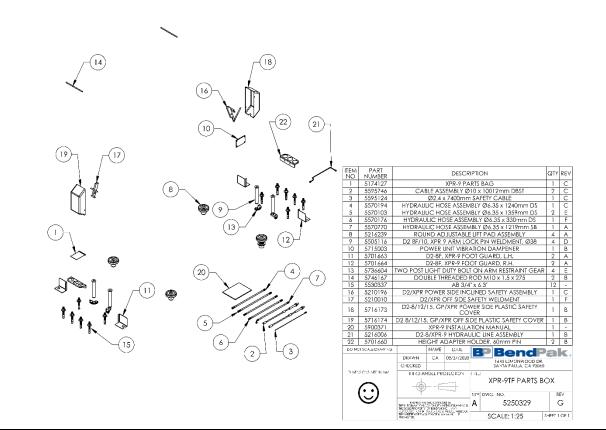


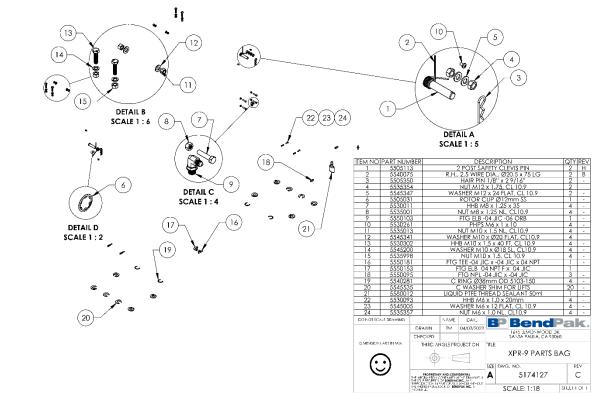


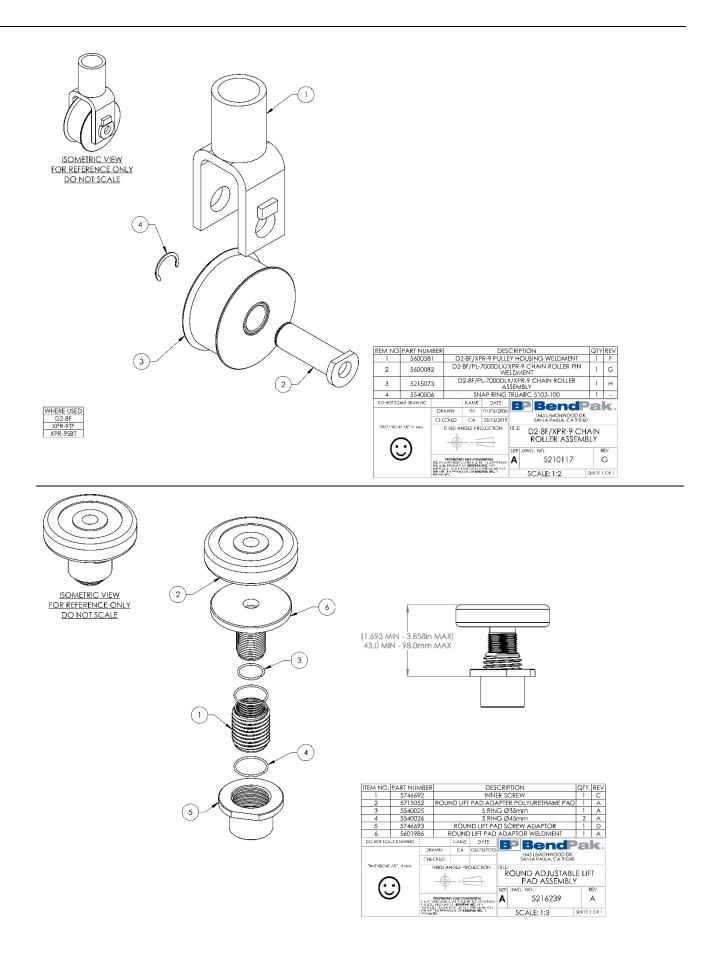
=	P Bend	ak.
	1645 LEMONWOOD   SANTA PAULA, CA 93	)
TITLE	XPR-9 LOW PROFIL TELESCOPING A ASSEMBLY	
S17E	DWG, NO.	REV
SILL	511011101	REV
A	5215287	M

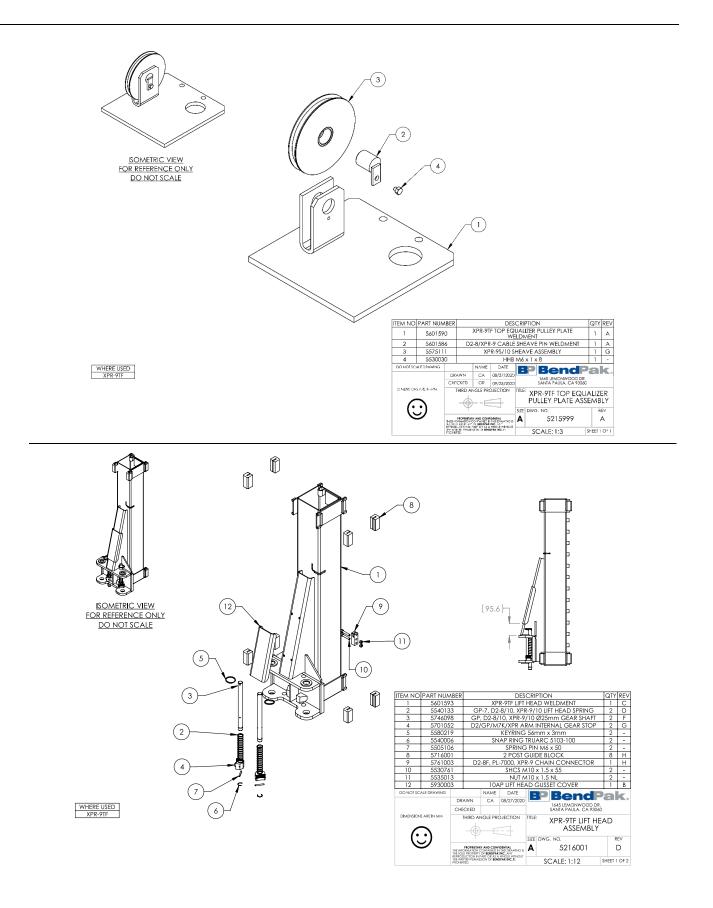


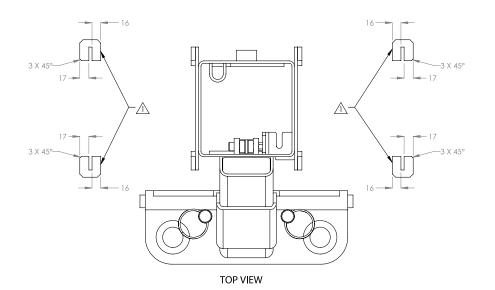






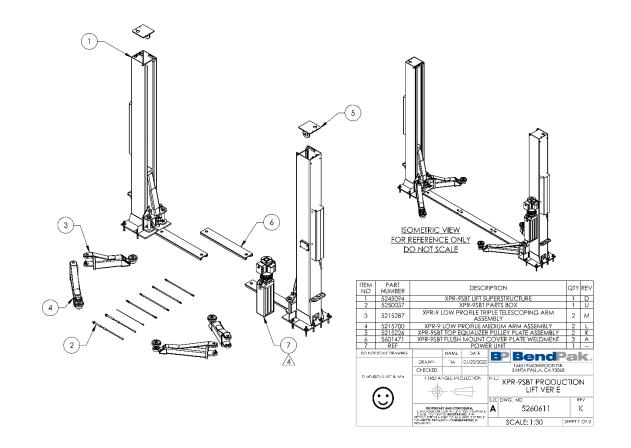


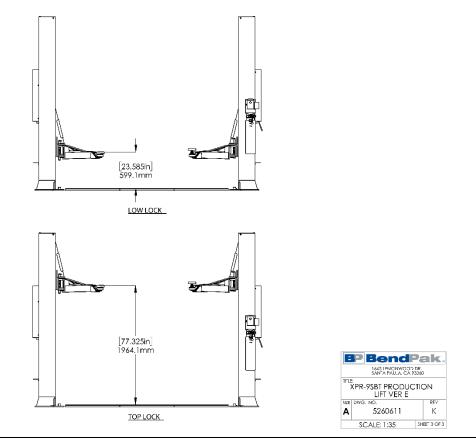


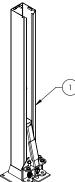


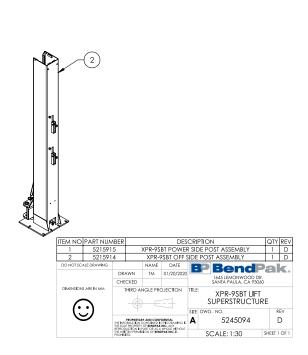
=	<b>P</b> Bend	Pak.
_	1645 LEMONWOOD SANTA PAULA, CA 9	DR. 3060
TITLE	XPR-9TF LIFT HE ASSEMBLY	AD
SIZE	DWG. NO.	REV
Α	5216001	D

XPR-9SBT

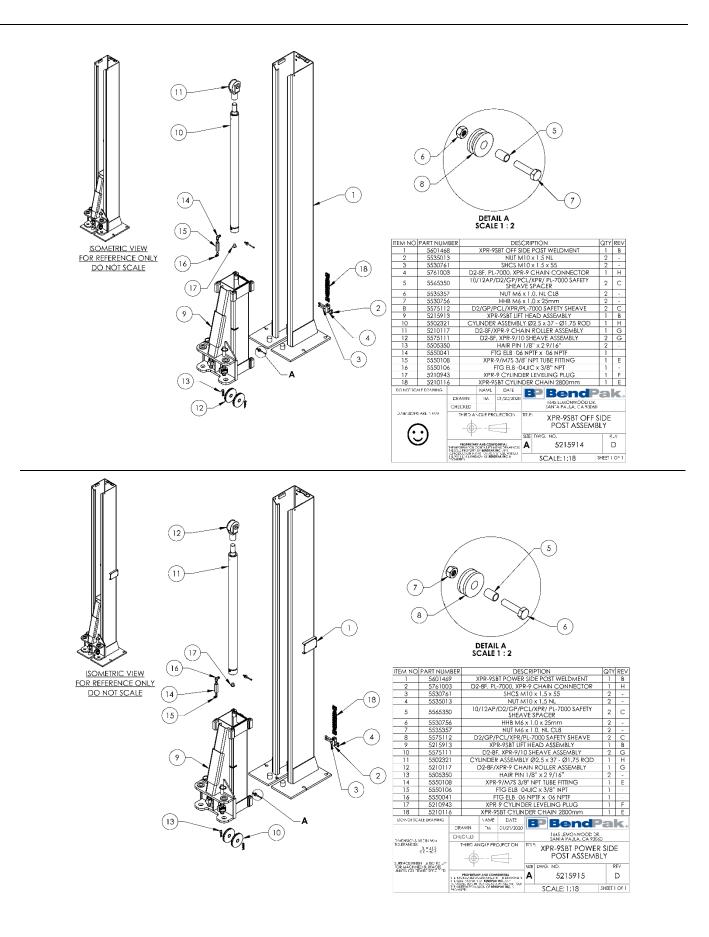


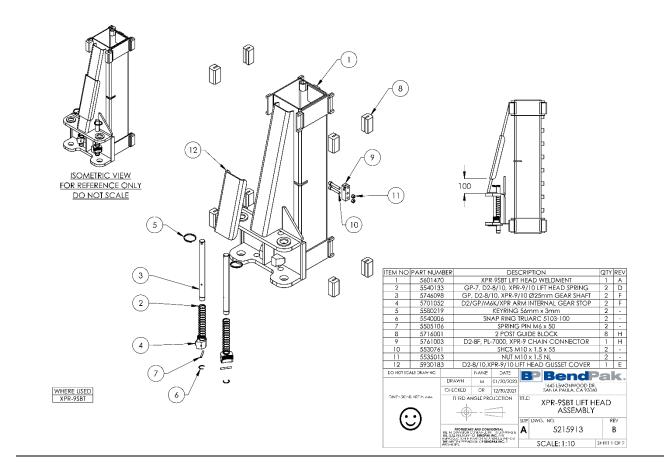


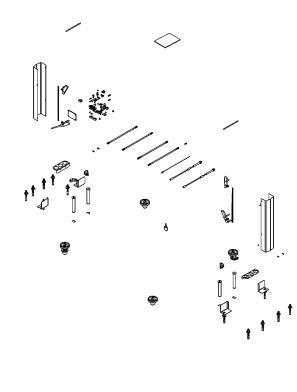




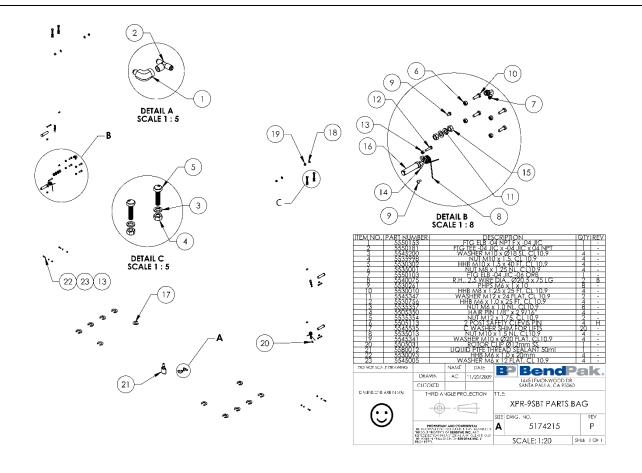
WHERE USED XPR-9SBT







ITEM NO.	PART NUMBER				DESCRIP	TION	QTY	REV
1	5174215			XPE	R-9SBT PA	RTS BAG	1	Р
2	5216239		ROUN	D AD.II	ISTABLE I	IFT PAD ASSEMBLY	4	A
3	5701214		XP	R-9.5A	FETY CLO	SEOUT COVER	2	G
4	5570104	)	(PR-9 HYD)	RAULIC	HOSE AS	SY Ø6.35 x 2985mm DS	1	Ē
5	5570103					LY Ø6.35 x 1359mm DS	2	E
6	5570176		HYDRAULI	C HOS	e asseme	3LY Ø6.35 x 330mm DS	1	F
7	5550095			FTG N	VPL -04 JI	C x -04 JIC	1	-
8	5595359		CABL	E ASSE	MBLY Ø1	0 x 9507mm DBST	2	D
9	5595161		XPR-	9 Ø2.4	mm x 640	00 SAFETY CABLE	1	E
10	5505116		D2-8F/10,	XPR-97	ARM LOC	K PIN WELDMENT, Ø38	4	D
11	5540281		(	C RING	Ø38mm	OD 5103-150	4	-
12	5715003		POV	VER UN	IIT VIBRAT	'ION DAMPENER	1	В
13	5731121			XPR-9	SAFETY LI	NKAGE BAR	2	G
14	5600370			XPR-9 S	SAFETY W	ELDMENT #1	1	K
15	5600372					ELDMENT #3	2	G
16	5600371					ELDMENT #2	1	Н
17	5736604	ΤW	O POST LIC	GHT DU	ITY BOLT (	ON ARM RESTRAINT GEAR		E
18	5746167		DOUB	LE THRE		DD M10 x 1.5 x 275	2	В
19	5530337				AB 3/4">		12	-
20	5900371					ION MANUAL	1	-
21	5701663					T GUARD, L.H.	2	A
22	5701664					T GUARD, R.H.	2	A
23	5701660		HEIG	HT AD	APTER HC	DLDER, 60mm PIN	2	B
DO NOT SCALE DRAWING		ving		NAME	DATE	<b>BP Bend</b>	Pa	Le .
			DRAWN	.1%	12/15/2015			
			CHECKED			- 1645 LEMON WOOD D SANIA PAU A, CA 930	к. 60	
DIMENSIONS ARE IN \$454		A5A	THED ANGLE PROJECTION TITLE:					
					XPR-9SBT PART	S BOX		
	UUT.		T			S7E DWG. NO.		EV
	J		PEOPRETAT H, INICORPATION H-SOIL/FECP-PI* EFFECOLC/CONING HEVERTEN NEOVE	T AND CONFICULT AND CONFICULT AND CONFICULT		A 5250037		U
			HEWRITEN SEVER	S CALOR BEND	PAKING. S	SCALE: 1:30	SHEET	LOE 2



# **Automotive Lift Institute (ALI) Store**

You probably checked the **ALI's Directory of Certified Lifts** (www.autolift.org/ali-directory-ofcertified-lifts/) before making your most recent Lift purchase, but did you know the **ALI Store** (www.autolift.org/ali-store/) offers a wide variety of professional, easy-to-use, and reasonably priced training and safety materials that will make your garage a safer place to work?

The ALI Store is your trusted source for workplace safety!



Lifting It Right Online Certificate Course. Make *sure* you and your people are lifting vehicles the right way.



ALI Lift Inspector Certification Program Registration. Become a ALI Certified Lift Inspector.



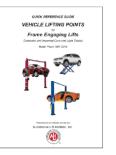
ANSI/ALI ALOIM Standard for Automotive Lifts. Safety Requirements for Operation, Inspection, and Maintenance.



ANSI/ALI ALIS Standard. Safety Requirements for Installation and Service.



Lifting It Right. A hardcopy version of the *Lifting It Right* safety manual from the Automotive Lift Institute.



Guide to Identifying Vehicle Lifting Points for Frame-Engaging Lifts. Don't eyeball your lifting points, *know* where they are.



**Uniform Warning Labels and Placards** for 2-Posts. Labels in Mandarin, French Canadian, and Spanish are also available.



Lift Operator Safety Materials. Five safety documents in a single package.



**Safety Tips Card.** Reminds your people of 13 key safety tips to follow daily.

Visit today and get the training and materials you need to work safely: www.autolift.org/ali-store/.

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